

Modern PACKAGING

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DETROIT



SEE COVER STORY PAGE 101

DECEMBER 1947

Frank Gianninoto



SHOULD THE RIGHT ADHESIVE BE?

RELY on National ... with its interest in your individual requirements ... for an adhesive that will be flexible enough to meet all plant and field variations.

Let's look at some individual requirements. A hard luggage adhesive should be easily handled and versatile. It should adhere vulcanized fiber to plywood ... 'draw on' leather to wood, fabric, paperboard, etc., ... bond wood molding inside sample cases ... laminate multiple plies of veneer before shaping under heat and pressure ... and offer exceptional resistance to weather and fungus. A soft luggage adhesive should leave bonded leathers and treated fabrics with an outstanding softness and pliability.

An upholstering adhesive should provide adequate

tack and speed for hand adhering cloth to cloth, chipboard, wood, wadding, etc. It should be free from residual odor and any tendency to penetrate and stain light fabrics.

A labeling and overcoating adhesive should bond to wood, fiber, painted steel, tin and glass. It should be weather-proof, vermin-proof, age-proof.

It doesn't matter whether your adhesive problem is a run-of-the-mill packaging, converting, assembling job or a brand new postwar problem. National is interested in creating an adhesive formula that will meet your individual requirements ... provide sufficient flexibility for material and commercial variations ... withstand all extremes of shipping and consumer uses. Your inquiry is invited — NOW!

• Offices: 270 Madison Avenue, New York 16; 3641 So. Washtenaw Avenue, Chicago 32; 735 Battery Street, San Francisco 11, and other principal cities. In Canada: Meredith, Simmons & Co., Ltd., Toronto. In England: National Adhesives, Ltd., Slough.

National
ADHESIVES

EVERY TYPE OF ADHESIVE FOR EVERY INDUSTRIAL USE

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JAN 6 - 1948

DETROIT



ye Christmas seal

CHRISTMAS shopping's finished and done with ... for another year. Now it's time for the packaging department to swing into action. Bring forth the Yuletide gifts from their well-known hiding places in the attic, the closets and the cellar. Don't forget the luncheon cloth for Aunt Mary, the inevitable tie for Uncle Joe, and the keen racing blades for little Willie. Unfurl the wrapping paper so gaily decorated in scenes of red and green. Get out the bright red ribbon with which to bind these friendly tokens. Proceed carefully, wrap securely, and put Christmas seals on every precious package.

Going from the seasonal to the commercial, or from Christmas packages to glass containers, our own seal comes to mind: The Phoenix C T Cap. This closure adds appeal to fine packages in the market place. It makes for less muss and fuss at removal time. And it is a one-time or long-time reseal—sturdy and shapely until the product is completely used.

Each Christmas packaging time don't forget to festoon every gift with the Christmas seal. In between time—at glass packaging time, that is—remember another familiar seal: the Phoenix C T Cap.



PHOENIX METAL CAP CO.

2444 W. Sixteenth St., Chicago 8 3720 Fourteenth Ave., Brooklyn 18

Modern PACKAGING

VOLUME 21

NUMBER 4

DECEMBER 1947



GENERAL

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Photo courtesy Brown Citrus Fruit Machinery Co.

Juice cups molded by Kirkhill Rubber Co.

A Squeeze Play that benefits everyone

FLOODS of vitamin-rich juice are whirled from ripe oranges by this automatic Citrus Juice Extractor.

The squeeze is on the orange halves as they are gripped and firmly pressed against whirling metal cones by cups made from a compound of Geon polyvinyl resin and Hycar American rubber.

Because this composite material is unaffected by fruit oils, acids, moisture, because it is impervious to contamination, because the cups made from it perfectly perform their gripping function despite variation in the size of fruit, important benefits result.

Ripe fruit is fully utilized, waste prevented, a healthful food product is available on your grocer's shelves at modest price, the owners of the ma-

chine have substantially reduced the cost of maintenance and operation.

Geon polyvinyl resins and Hycar American rubber are materials for which new cost-saving, problem-solving uses are discovered almost daily. Molded, calendered, cast, or used as impregnants for fibres and fabrics, their versatility may contribute importantly to the product you make and to articles you use daily.

B. F. Goodrich Chemical Company makes no finished products from Geon or from any other raw material. However, we will be glad to work with you on any special problems of application. We are particularly interested in developing new end uses for these materials. For more information please write Department HI-6, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio.



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Member of Audit Bureau of Circulations

A NEW CHALLENGE

THE INTERNATIONAL situation, very soon, is likely to call once more on the packaging field for all of its specialized knowledge and experience. Almost single handed, our country faces the task of rebuilding a chaotic world. The newspapers play up the amount of money—in billions—that will be required for the job. But the point which no packaging man will miss is that it is THINGS—including not only packages, but the kinds of industrial equipment and raw materials that make packages—that will be sent overseas. This involves several points of importance.

► Packaging faces once more the possibility of severe shortages. Steel, for instance: Our finished-steel production for 1948, taking into consideration certain expansions in productive equipment, may reach 64,400,000 tons. Our export of finished steel in 1946 was 4,700,000 tons, which was 9.7% of production. Estimates of the requirements of the European nations vary widely, possibly totaling 12,000,000 tons of finished steel and products made of steel. Aside from the impact of this on all industry, it spells for the packaging man an inadequate supply of tinplate, with consequent substitutions of other types of packages, leading in turn to more aggravated shortages of such other materials as paper and glass.

► Packaging of exported commodities will be utilized for an important national purpose. In the proposed emergency foreign-aid bill is this provision: "Section 8: All commodities made available pursuant to this Act, or the containers of such commodities, shall to the extent practicable be marked, stamped, branded or labeled in a conspicuous place . . . in such a manner as to indicate to the people of the country of destination that such commodities have been furnished or made available by the United States."

Both challenges must be met and packaging must be prepared to meet them.

The Editors

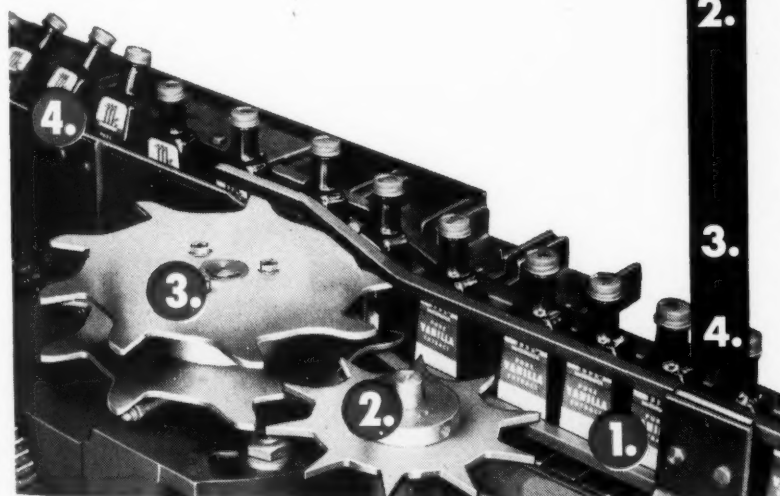
ONLY THE *Finest* CARTONER CAN GIVE YOU THE *Lowest* CARTONING COST

As your product reaches the cartoning operation, manufacture is complete. All subsequent handling must safeguard the investment in labor and materials made up to that point.

Jones Cartoners are unique in their method of handling bottles, jars and vials as they are received from the proceeding station. In smooth-flowing constant motion, they are separated, brought into correct timing, and placed in loading position.

Regardless of shape or size, the transfer is made gently, positively. The use of two starwheels eliminates the clash-bang of intermittent operation. Even at speeds of 200 per minute, the transfer is smooth, unhurried, quiet. Breakage and stoppages are reduced to the vanishing point.

Dual starwheel transfer is one of many Jones superiorities that give you lowest cartoning cost. Compare your present cartoning methods with Jones Cartoning. Write today for complete information.



1. Bottles are delivered upright by the labeling machine to the infeed conveyor.
2. Separator starwheel gently takes one bottle from the line and feeds it, in correct timing, into the transfer starwheel. Should a bottle arrive lying down, the cartoner automatically stops. No chance to break a bottle or damage machine.
3. Transfer starwheel and guide rails gradually move bottle from infeed to bucket conveyor.
4. Bottle is gently laid horizontally in buckets ready for loading into carton.

R. A. JONES & COMPANY, INC.

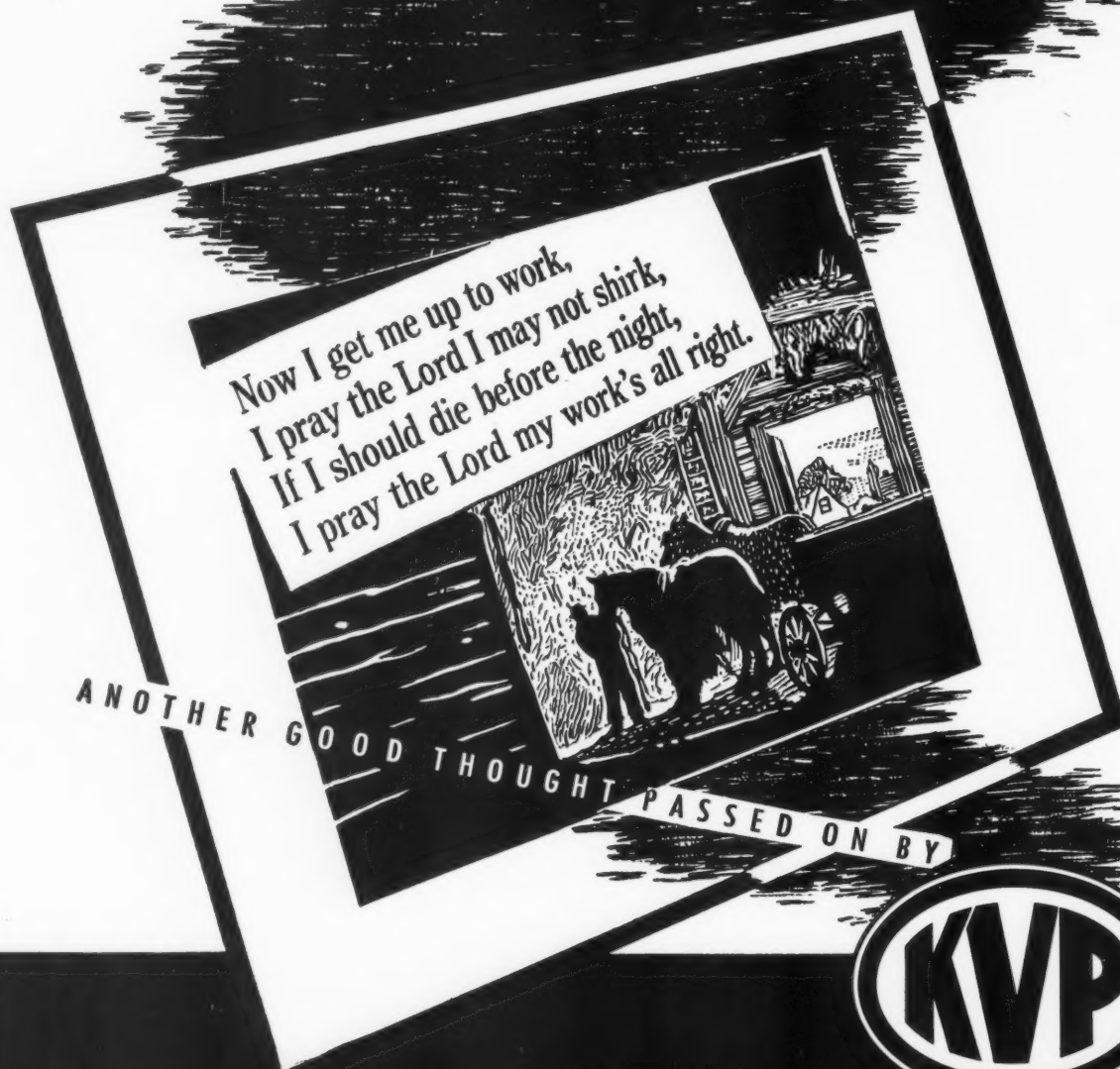
P. O. Box 485

CINCINNATI, OHIO

THE MAJORITY OF AMERICA'S CARTONED PRODUCTS ARE JONES CARTONED

DECEMBER 1947

5



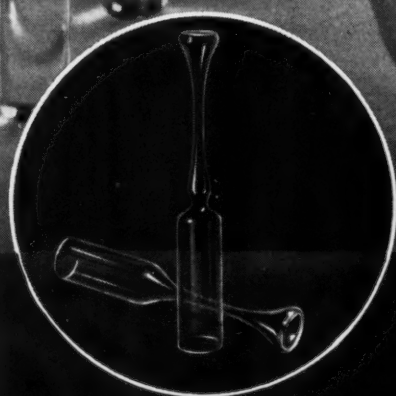
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KIMBLE'S *New* **TUF-TOP** *Neutraglas* **AMPULS**



In hand sealing, operator easily holds top in fingers, requiring no tool. In machine filling, large sturdy top affords positive grip.

FEATURES

NO CHIPS

✓ **Handier Sealing**

Easy Entry of Needle

Steady Racking

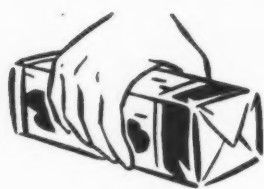
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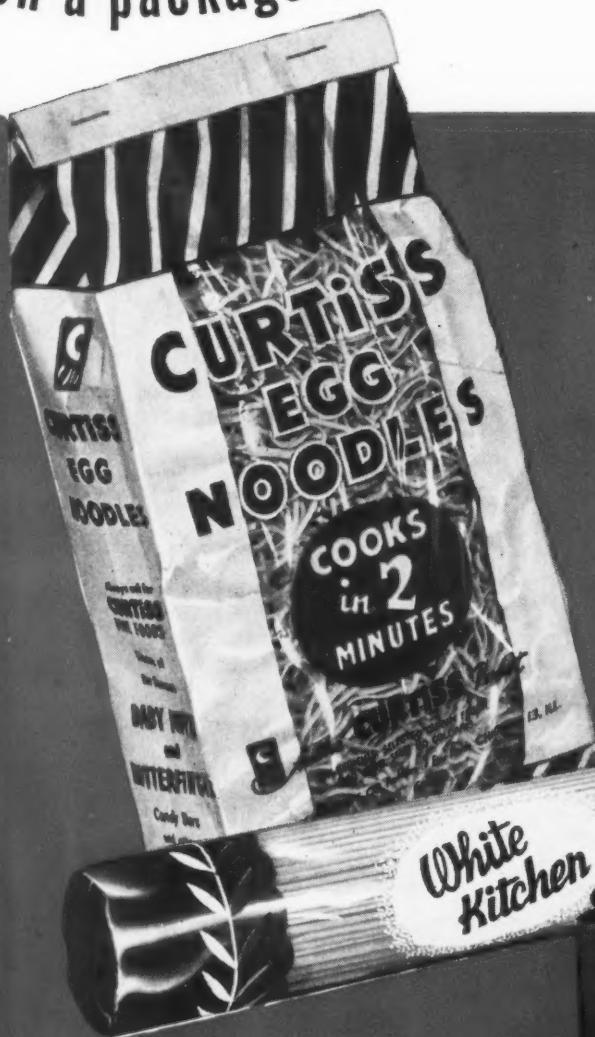
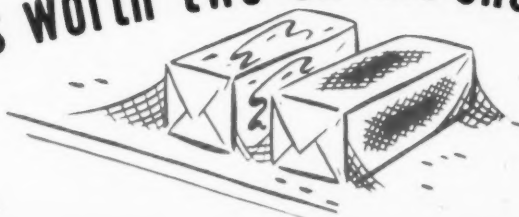
Toledo 1, Ohio

DIVISION OF OWENS-ILLINOIS GLASS COMPANY

NE



When a package in the hand is worth two on the shelf!



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PACKAGES....

designed
TO SELL!

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*A 100% Rayon fabric
- at the price of paper!*

Here's exciting news for the Packaging Industry!
RAYONEZE . . . a totally new and revolutionary
textile development . . . rich, lustrous fabric,
produced at an unbelievably low cost.

RAYONEZE sacrifices *nothing* in quality . . . just feel
that soft, silk texture! Use RAYONEZE . . . as a
glamorous background in linings . . . for the ultimate
in luxurious wrappings . . . to create ingenious
packaging with dramatic punch and magnetic
allure. Add more buy-appeal to your products with
its glorious, glowing colors. And do all these at an
amazingly low price. Demand RAYONEZE and
save . . . save . . . save!



Rayoneze



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The following are available — flame proofed if specified.

M750 RAYONEZE— Stripe embossed on solid pastels or printed candy stripe on white background in Crocus, Rose Tan, Crayon Green and others colors. 40" wide.

M660 RAYONEZE— Diamond embossed on solid pastels or printed diamond design on white background. In such colors as Forget-me-not Blue, Melon Pink and Lemon Yellow. 40" wide.

Also available—a similar product . . .

B500 RAYONEZE— A plain finish material in Old Glory Red, Lilac, Salmon, Copen Blue, Lustre Blue, Rose Pink, Myrtle and Primitive Green. 36" wide.



Select your opal jars with care. They are your package... your customer's first impression of your product and your company. It is to your advantage to present your product as attractively as possible. Why not get acquainted with

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You can see for yourself their uniform density, their brilliant whiteness, their flawless quality.



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Light-Reflecting Aluminum Foil puts a Spotlight on your Product! — Foil has Eye Appeal... Sales Appeal... and creates a super-quality impression. Competition is getting keener... better check up now on the BIG LIFT Foil can give your sales. Write us for information, samples, and ideas regarding Foil Cartons for increasing sales and profit.



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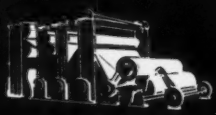
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FROM PULP TO PACKAGE



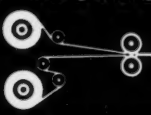
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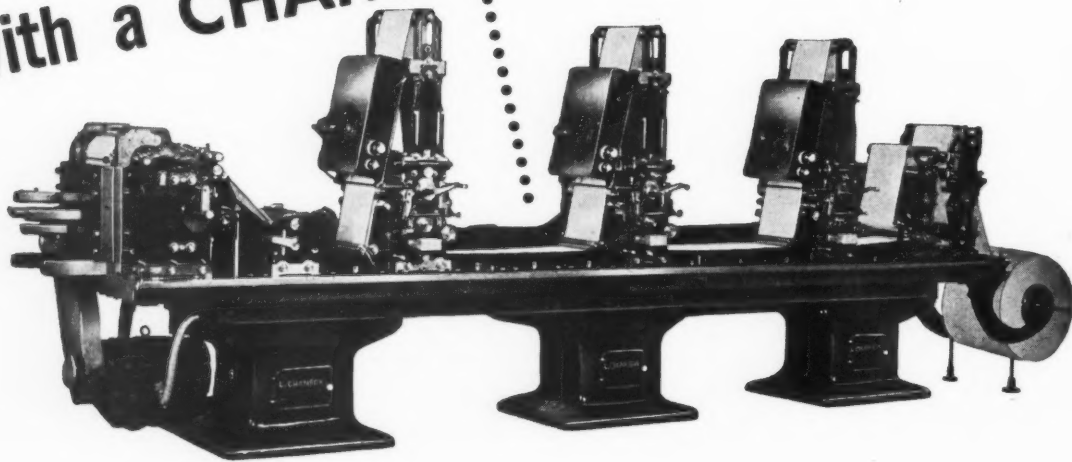


PRINTING



PACKAGE

Advance
 your production techniques
25 years
 with a CHAMBON gravure press



If you are using old-style gravure presses and other obsolete production equipment, you can modernize your production line and advance your production techniques 25 years by installing the Chambon press.

This press will make it possible for you to compete successfully with today's high speed and high volume runs. And yet, you can get from it the highest quality in printing not only gravure, but letterpress and offset as well.

Furthermore, the Chambon will do more than just print.

The bed of the press is built to allow the addition of extra units to do special jobs. It can be fitted, for example, to perform such functions as numbering, creasing, embossing, perforating, scoring, rotary or flat die-cutting, rotary or guillotine or sheet-cutting and re-winding. And, depending upon the run of packages, wraps, labels, tags, etc., you can add or subtract any single unit from the complete press base.

Let us show you one of the Chambon presses in operation.

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UNOPENED

**New type tubular package
of LUMARITH* FILM
makes sales without handling**



Tube manufactured by Kellogg Container Division, United States Envelope Company, Springfield 2, Mass. Philip E. Wilcox, designer.

Thousands of sales and not a stocking damaged by handling, is the record of this feather-light transparent tube designed for B. Altman & Co., N. Y.

It is a design that

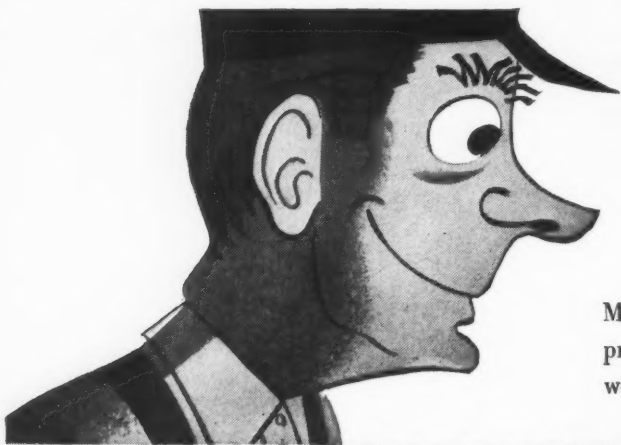
- ... has immediate sales appeal
- ... conveys the idea of quality
- ... is soft and pleasant to touch
- ... is adaptable to fast-turnover merchandise
- ... is ideal for Self Service dispensing units
- ... uses economical thin (.005") film
- ... achieves rigidity through curved surfaces and beaded edging

If you have a product that is adaptable to this consumer accepted packaging method, get complete details from a Celanese representative.

**CELANESE CORPORATION OF AMERICA, Plastics Division,
Dept. P-1, 180 Madison Avenue, New York 16, N. Y.**

*Reg. U.S. Pat. Off.





Mister Finnegan's nose is in again

Mister Finnigan (as we will call him here) is the prototype of all the foremen and inspectors and workers at the Sun Tube Corporation.



Mister Finnigan's nose is pushed in everywhere at Sun Tube's plant, seeing that extruders are extruding, coaters coating and sealers sealing with all the precision, polish and no-kidding perfection that good tubes deserve.



Mister Finniganism
is nothing more nor less than

attention to detail

And it results inevitably in tubes that are precisely uniform; are brilliantly decorated in crisp, clear colors; and are, in sum, so good that they are used by the most respected names in business → by Antiphlogistine, Murphy and Minit-Rub and several others.

Finniganism is therefore encouraged at Sun Tube. It makes such good tubes. And is so-o profitable to users.

Sun Tube Corporation

Hillside, New Jersey

CHICAGO 3, ILL., James L. Coffield, Jr., 105 West Adams Street

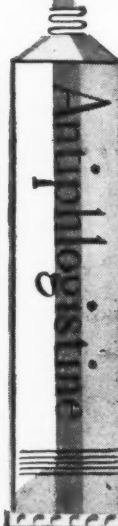
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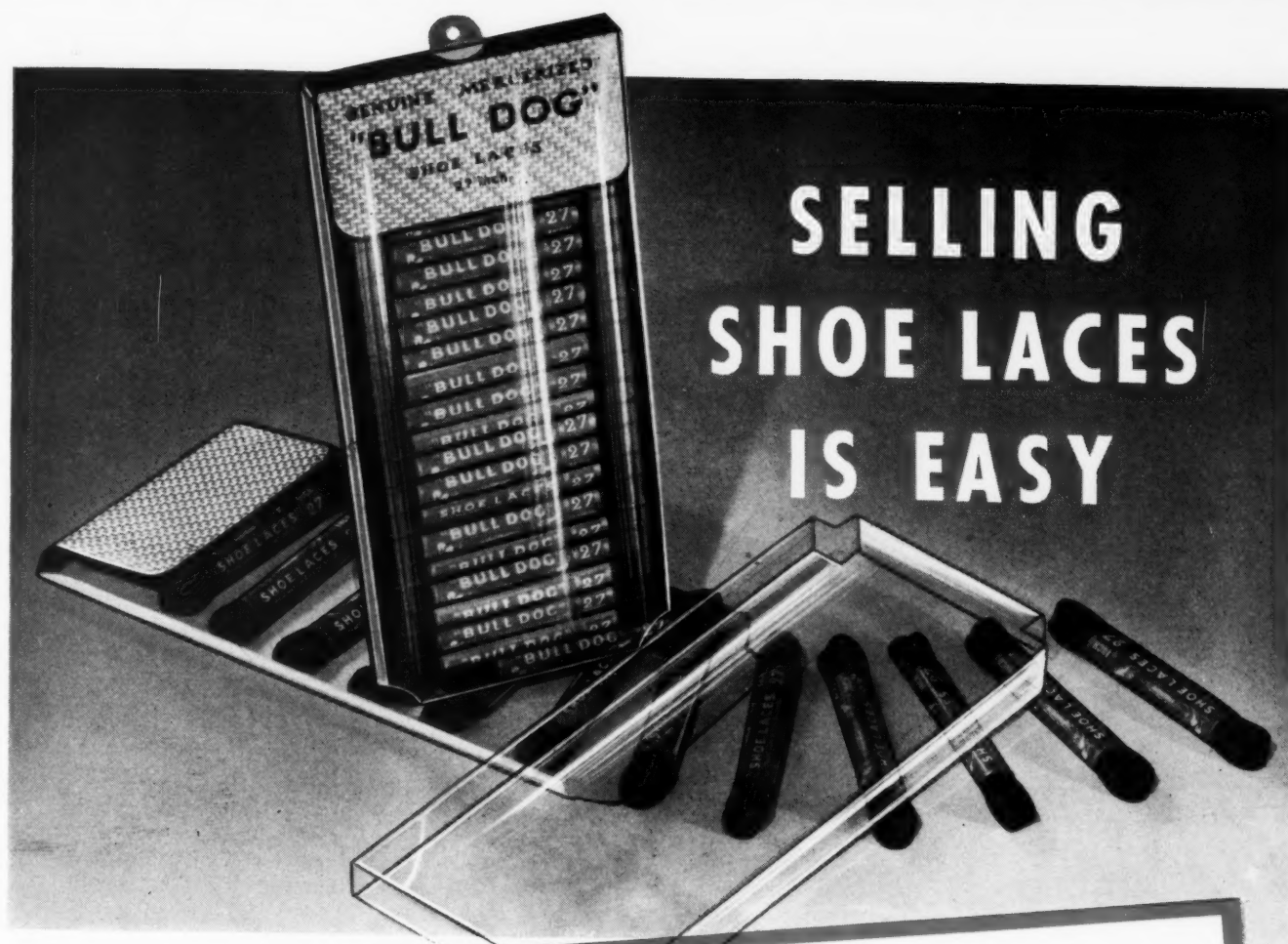
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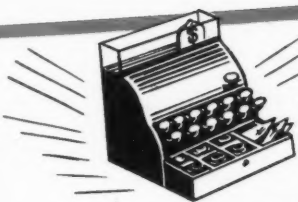
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SELLING SHOE LACES IS EASY



... this way

This Shaw-Randall retail dispenser makes Conrad's "Bull Dog" Shoe Laces easily sold, because they are easily seen . . . and readily removed from the container.

We designed this to speed up packing as well as sales. The set-up cardboard container is machine packed . . . then slid into the protecting acetate sleeve.

Let us show you how our complete facilities for set-up box and acetate packaging can produce a similar unit for your product.

SHAW-RANDALL CO.

DESIGNERS AND CREATORS OF VISIBLE PACKAGES

A DIVISION OF THE SHAW-PAPER BOX CO. • PAWTUCKET • RHODE ISLAND

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VERSATILITY

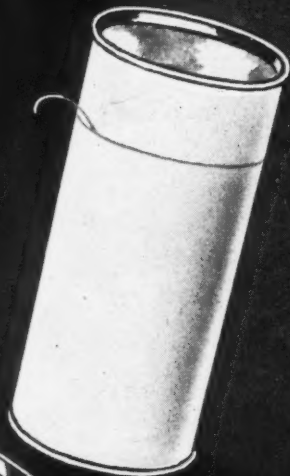
IS THE KEY NOTE OF STRING OPENING CANS

by
Sefton

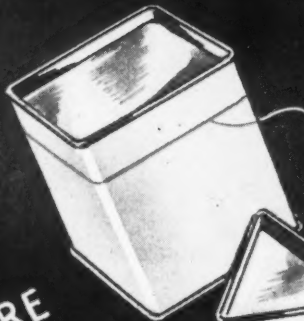
OBLONG



OVAL



SQUARE



ROUND



TRIANGULAR



OBOUND



There's a Sefton string-opening can for every need and product! Two popular types... the double-wall telescope that can be closed again... and the single-wall can that's easily disposed of. All are easy-to-open, factory-sealed and tamper-proof. Shapes galore... square, round, oval, oblong, triangular and obround in all lengths. Let SEFTON solve your packaging and merchandising problem with a string-opening can!

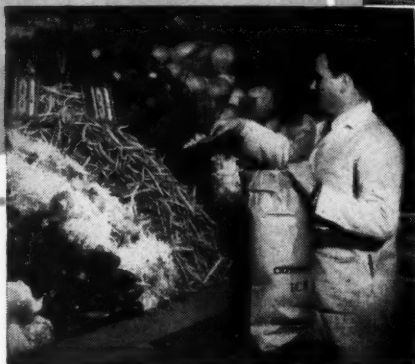


DISTRICT OFFICES: • Los Angeles • San Francisco • Denver • Dallas • Chicago • Des Moines • New Orleans • Boston • Detroit • Kansas City • St. Paul
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Wet Strength Paper Scores Again... in a new "BIG DEMAND" item!

PAPERS MADE WITH
PAREZ[†]
RESIN 607
PROVIDE CLEAN...EFFICIENT
"ONE-TRIP BAGS"
FOR PROCESSED ICE

5. In the store. Store-keepers save time and trouble in icing their products. The bags long outlast the ice...serve other purposes about the store.



1. In the plant. Popularity of the new bags begins with the ice manufacturer. Filling and weighing, for instance, become one quick, simple operation.

2. On the truck. Delivery is more efficient. Bags remain dry and easily handled...there's no pick-up of used containers to bother with.

3. At the home. Hostesses... like hotel and restaurant chefs... find chipped ice that comes in the handy bags as sanitary as the food itself.



4. At the refreshment counter... in stores, hotels, restaurants or in the home, cubed ice that's packaged for easy handling is appreciated.



Photos courtesy Union Bag & Paper Corp.

Yes, Cyanamid's PAREZ Resin 607 has helped create another big, profitable market for paper manufacturers! Now it's "one-trip" wet-strength paper bags for the efficient marketing of cubed and sized ice to homes, restaurants, hotels and food stores.

No longer must the ice manufacturer buy and maintain returnable-type containers that have to be sterilized and stored for future use. Customers, too, like these strong, drip-proof paper bags that make processed ice easy to buy and handle.

Along with their increased sales and profits, paper

manufacturers find PAREZ Resin 607 extremely easy to use. Simply added during the paper manufacturing process, it imparts increased wet and dry strength... improved tensile and bursting strength... added folding resistance... enhances the versatility and usefulness of the paper in general.

Is your business paper or packaging? Then consult Cyanamid's Technical Service representatives. They'll gladly show you how PAREZ Resin 607 can improve your products... open to you the new and profitable markets this remarkable resin is finding for paper.

WHEN PERFORMANCE COUNTS...CALL ON CYANAMID

Industrial Chemicals Division
**AMERICAN
CYANAMID
COMPANY**

30 ROCKEFELLER PLAZA • NEW YORK 20, N. Y.

DISTRICT OFFICES: Boston, Massachusetts; Philadelphia, Pennsylvania; Baltimore, Maryland; Charlotte, North Carolina; Cleveland, Ohio; Chicago, Illinois; Kalamazoo, Michigan; Detroit, Michigan; St. Louis, Missouri; Azusa, California; Seattle, Washington. In Canada: Dillons Chemical Company, Ltd., Montreal and Toronto.

[†]Trade-mark of American Cyanamid Company covering its synthetic resins for use by the paper industry. The processes under which PAREZ is applied in the production of wet-strength paper are covered by U. S. Patents Nos. 2,291,079, 2,291,080 and 2,345,543 and U. S. Patent Application Serial No. 453,032.

For low-cost chemical equivalent of distilled H₂O... FULT-R-STIL[®] Demineralizing Units.



For REGAL SHOE COMPANY

*Variable Designation Marking on Parts,
Product and Package—Start to Finish*



Marking by MARKEM ... of course!

THE PROBLEM: To speed marking and identification all down the line, thus speeding production and reducing selling time. Considering the number of sizes, widths and styles involved, and the many and varied leather parts which go into the making of a single shoe, each of which must be clearly marked after cutting for quick identification in further operations—here was a tall order.

THE SOLUTION: Use of MARKEM Service — methods, machines and inks — all down the line, start to finish. Now case numbers and numbers of pairs are filled in on the mimeographed piecework payrolls tags by a machine which automatically feeds and prints them simultaneously, at a speed of 250 imprints per minute. Now all upper leather parts are "match marked" quickly after cutting, to insure that pieces of the same color and weight of leather will be used in a given shoe. Now also quarter linings are clearly stamped with size, width, case and stock number for rapid identification by shoe clerk and customer; the name "REGAL" is stamped in gold on the heel pads; and the shoe box is marked in a color and type-style to harmonize with the attractive design of the box — all with MARKEM machines and inks — and all in short order.

LET MARKEM solve your problem. MARKEM service includes method, machine and inks to meet your individual requirements of speed, material and purpose, whether in marking boxes, bottles, labels, or the product itself. Tell us your needs; we'll do the rest.

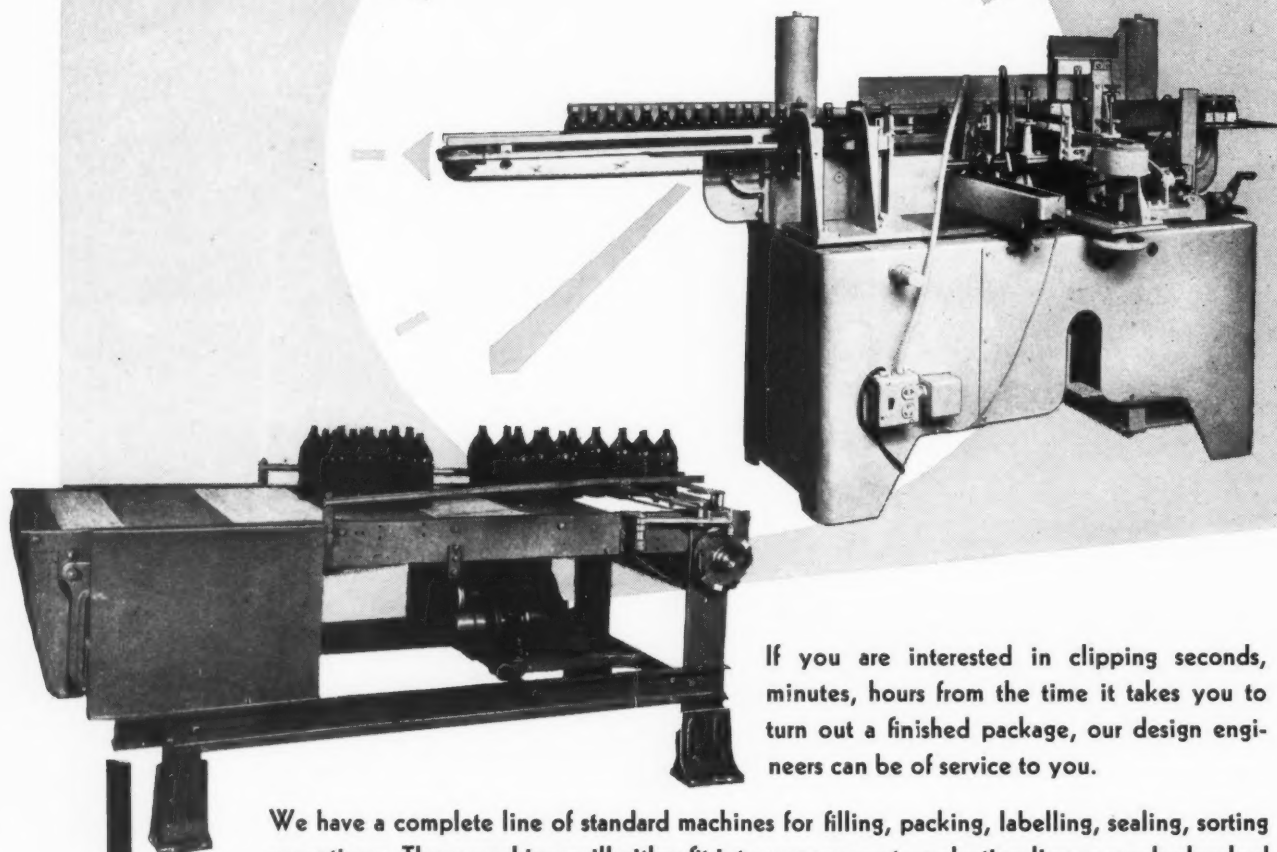
MARKEM
MACHINE
COMPANY
KEENE, N. H.

the man
who has
a thing
to sell,
and goes
and hollers
down a
well,
is not
so apt
to collar
the dollars
as he
who climbs
a tree
and hollers!

We sell packaging papers.

Matthias Paper Corporation, 165 W. Berks Street, Philadelphia 22, Pa.;
New England — 12 Brook Street, Wellesley 81, Mass.; Southern Office —
Guilford Building, Greensboro, N. C.

Clip Hours from your **PRODUCTION SCHEDULE**



If you are interested in clipping seconds, minutes, hours from the time it takes you to turn out a finished package, our design engineers can be of service to you.

We have a complete line of standard machines for filling, packing, labelling, sealing, sorting operations. These machines will either fit into your present production line or can be hooked up on a special conveyor system which we can design to fit your particular plant layout.

But whether you get a single machine or an entire system from Standard-Knapp, you are sure of well-designed and well-constructed equipment that functions smoothly and accurately. For Standard-Knapp machines operate with a maximum of speed and efficiency and a minimum of moving parts.

All Standard-Knapp machines are precision-built. Many years' experience in the design and application of packaging machinery is your assurance of competent handling of your packaging problems.

Standard-Knapp Corporation

MANUFACTURERS OF CASE SEALING, CASE PACKAGING AND CAN LABELING MACHINES
FACTORY and GENERAL OFFICES—PORTLAND, CONNECTICUT

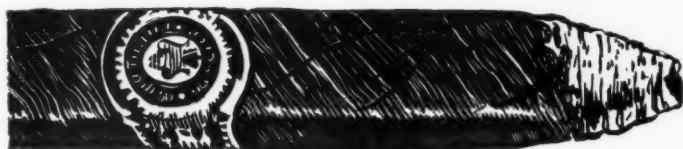
570 Lexington Avenue
NEW YORK 22, N. Y.
420 S. San Pedro Street
LOS ANGELES 13, CALIF.
6 Radcliffe Rd.
ALLSTON 34 (Boston), MASS.

221 North La Salle St.
CHICAGO 1, ILL.
3222 Western Avenue
SEATTLE 99, WASH.
Royal Bank Bldg., Barton & Wentworth Sts.
Hamilton, ONTARIO, CANADA

145 Public Square
CLEVELAND 14, OHIO
1412 N. W. 14th Avenue
PORTLAND 5, OREGON
Orlando
FLORIDA

500 Seventh Street
SAN FRANCISCO 3, CALIF.
349-350 Paul Brown Bldg.
ST. LOUIS 1, MO.
Windsor House, Victoria St.
LONDON S. W. 1, ENG.

a cigar
touched off
this yarn



FOR many years, one of our new Old Dominion customers has been making virgin wool bleached yarn for home knitting. His problem had been "how to establish a brand name preference and increase sales". And Old Dominion found the solution in a special type canister which we designed for packaging cigars during the war. It was a "natural" for a 4-ounce, loosely wound ball of yarn.

Yes, here's a product that is really moving — thanks to an attractive Old Dominion package that boosted sales through its greater take-home value. And we're not prejudiced about canisters either, for we also make corrugated boxes, folding boxes, set-up boxes, and acetate packages. So send a sample of your product to Old Dominion and get the best in packaging advice. Write today for canister folder #73.

OLD DOMINION

PLANTS LOCATED THROUGHOUT THE SOUTH

Box Company Inc.

CHARLOTTE • N. CAROLINA

THE SOUTHERN BOX MAKER WITH A NATIONAL REPUTATION

DECEMBER 1947

21

There's nothing more beautiful
than a *Curve*



Artists will tell you that the most beautiful line is the curved line. Practical packaging engineers and sales-seeking merchandising men who design containers for utility and sales appeal know this to be true.

Philadelphia Round Containers are designed to influence an UPWARD CURVE in your sales chart.

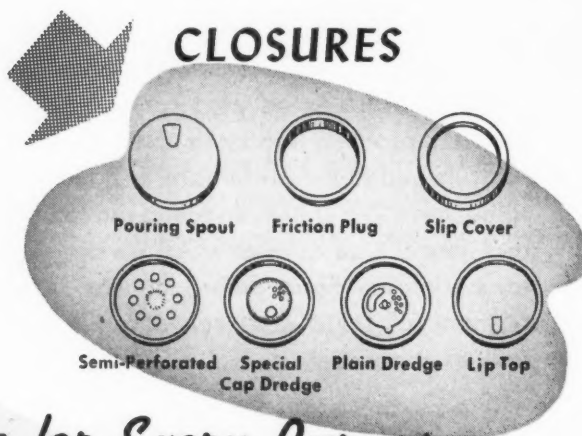
Whether you package drugs or toys, textiles or foods, chemicals or candies, calendars or cosmetics, we have sales-stimulating Round Containers, and paper tubes to fill your needs adequately and economically.

Select your own moisture and grease-proof liner from parchment, glassine, paraffine and foil.

Prompt delivery—usually within two weeks after receipt of your specifications and labels. We invite orders of all sizes. Contact us today!



CLOSURES



Round Packaging for Every Purpose

CORES AND TUBES • COMBINATION TIN AND ALL PAPER CANS

ALL PAPER CANISTERS
PAPER CORES AND TUBES

FRICTION PLUG CANISTERS
TREATED CONTAINERS

INSECTICIDE PUMP GUNS
TELESCOPIC MAILING CASES



PHILADELPHIA CONTAINER CO.

SWANSON STREET AND OREGON AVENUE
PHILADELPHIA 48, PA.

GENERAL MILLS VACUUM FILLERS

for non-freeflowing and freeflowing powders give you...

FLEXIBLE SPEED

Three hundred one-pound containers a minute—two 5 pound containers a second! That's the kind of filling speed you can expect from a General Mills Vacuum Filler... on any type of non-freeflowing and freeflowing powder, on any kind of rigid or semi-rigid container from steel drums to tiny face powder boxes.

Speed can be perfectly synchronized with other units in your packaging line... and the machines can be adjusted for varying package sizes in a matter of minutes.

UNIFORM ACCURACY

No more costly "over-filling"... No more troublesome "under-fills"—a General Mills Vacuum Filler delivers split-ounce accuracy, hour after hour with no adjustment.

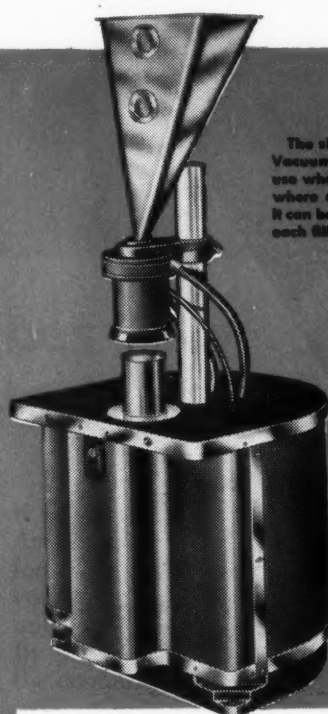
Density (volume of given weight) is controlled automatically, too. Intermittent release of vacuum during the filling cycle applies unique screen cleaning action which maintains accurate weight and volume, and eliminates the "angle of repose" which often complicates the filling of small mouth bottles and jugs.

DUST-FREE OPERATION

Imagine a dust-free filling room! Time-wasting cleanups reduced—no more wasted dollars worth of your product coating walls and floors and gumming up costly machinery.

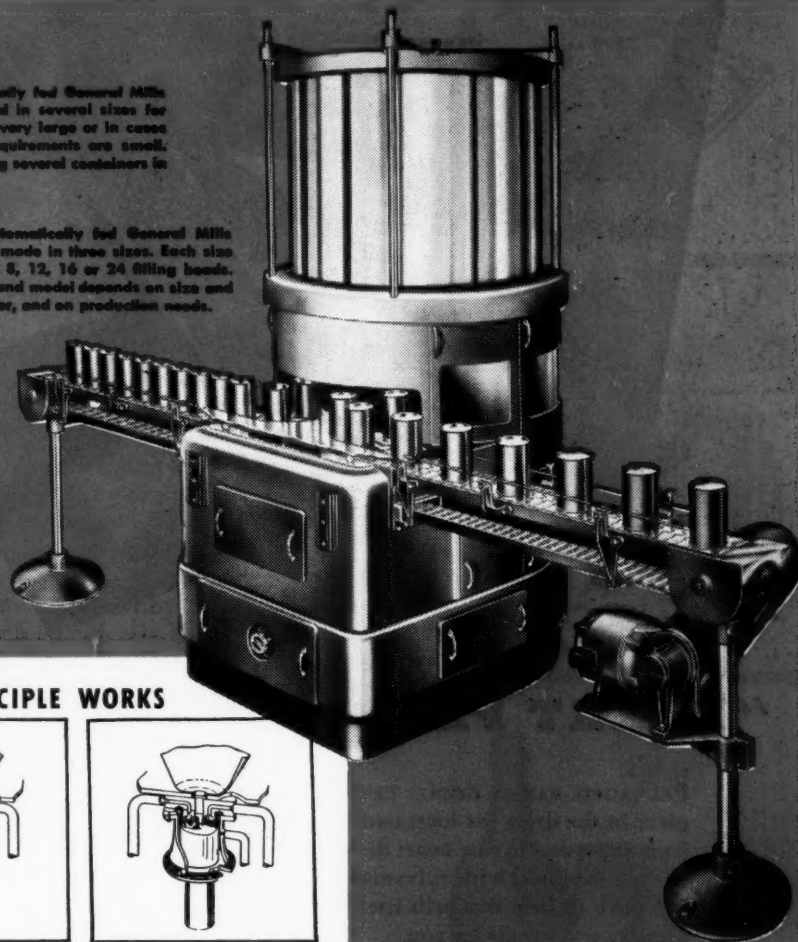
When you use a General Mills Vacuum Filler, all the product goes into the container... because filling heads are dust-sealed.

You improve working conditions. You cut housekeeping costs. You prolong the life of all the machinery in your filling room. You save the cost of shut-downs and repairs.

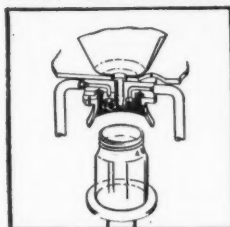


The single head, manually fed General Mills Vacuum Filler is designed in several sizes for use where containers are very large or in cases where unit production requirements are small. It can be adapted for filling several containers in each filling cycle.

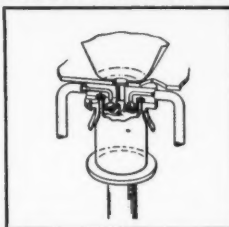
The rotary, automatically fed General Mills Vacuum Filler is made in three sizes. Each size is available with 8, 12, 16 or 24 filling heads. Selection of size and model depends on size and shape of container, and on production needs.



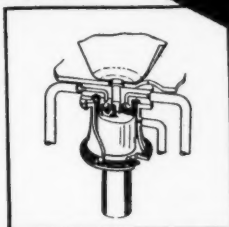
HOW EXCLUSIVE VACUUM PRINCIPLE WORKS



This section through the filling head shows jar about to be raised to filling position. Note two-compartment screen in filling nozzle and vacuum lines leading out at each side. Filling cycle about to start.



Centering guide has accurately positioned jar under filling nozzle. Jar rim is sealed tightly against hopper. Now vacuum is alternately drawn and released to fill jar and create "tamping action."



Containers subject to collapse are filled in a special shroud. Vacuum is drawn outside as well as inside the container. Container opening is sealed from shroud to prevent flow of material into shroud.

The same vacuum principle is adapted to the filling of freeflowing materials by placing an adjustable head and nozzle in the filler chute to hold the material at its "angle of repose."

Mechanical Division
General Mills, Inc.
1620 CENTRAL AVE. • MINNEAPOLIS 13, MINN.

Made by one of the world's largest users of packaging machinery

WRITE FOR ADDITIONAL INFORMATION: GENERAL MILLS, INC., MECHANICAL DIVISION, 1620 CENTRAL AVENUE, MINNEAPOLIS 13, MINN.



"SMART PACKAGING IS SMART SELLING"

MR. CELLOPHANE

PACKAGED BAKED GOODS have an important place in the drive for increased sales. Put oven-fresh cup cakes in this smart die-cut carton—seal in their freshness with Sylvania Cellophane and you have an item that sells itself . . . helps build prestige and profits for you.

Sylvania Cellophane has all the qualities

needed to keep baked goods tastily fresh. Every step in its manufacture is constantly checked. This careful control assures not only uniform transparency and grease protection, but the high degree of moisture protection that keeps baked goods from drying out—so important in this type of packaging.

SYLVANIA CELLOPHANE

Made only by **SYLVANIA DIVISION**

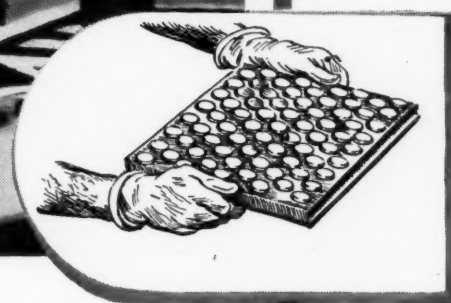
AMERICAN VISCOSE CORPORATION

Manufacturers of cellophane and other cellulose products since 1929

General Sales Office: 122 E. 42nd Street, New York 17, N. Y.

Plant: Fredericksburg, Va.

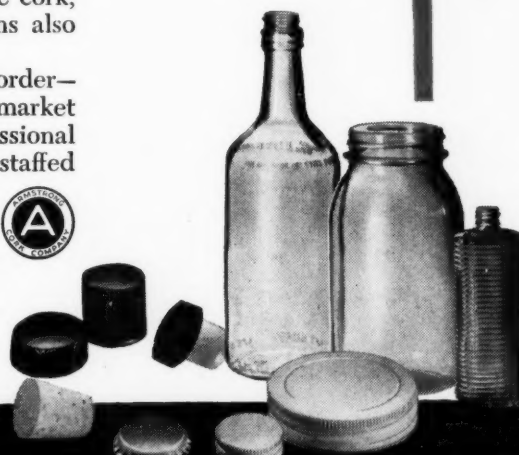
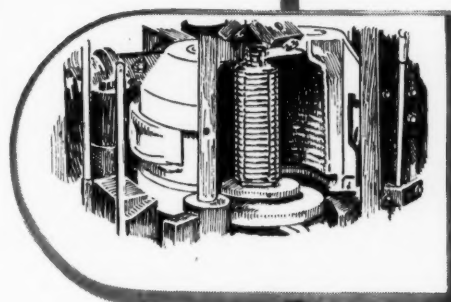




Let Armstrong Solve Your Packaging Problems

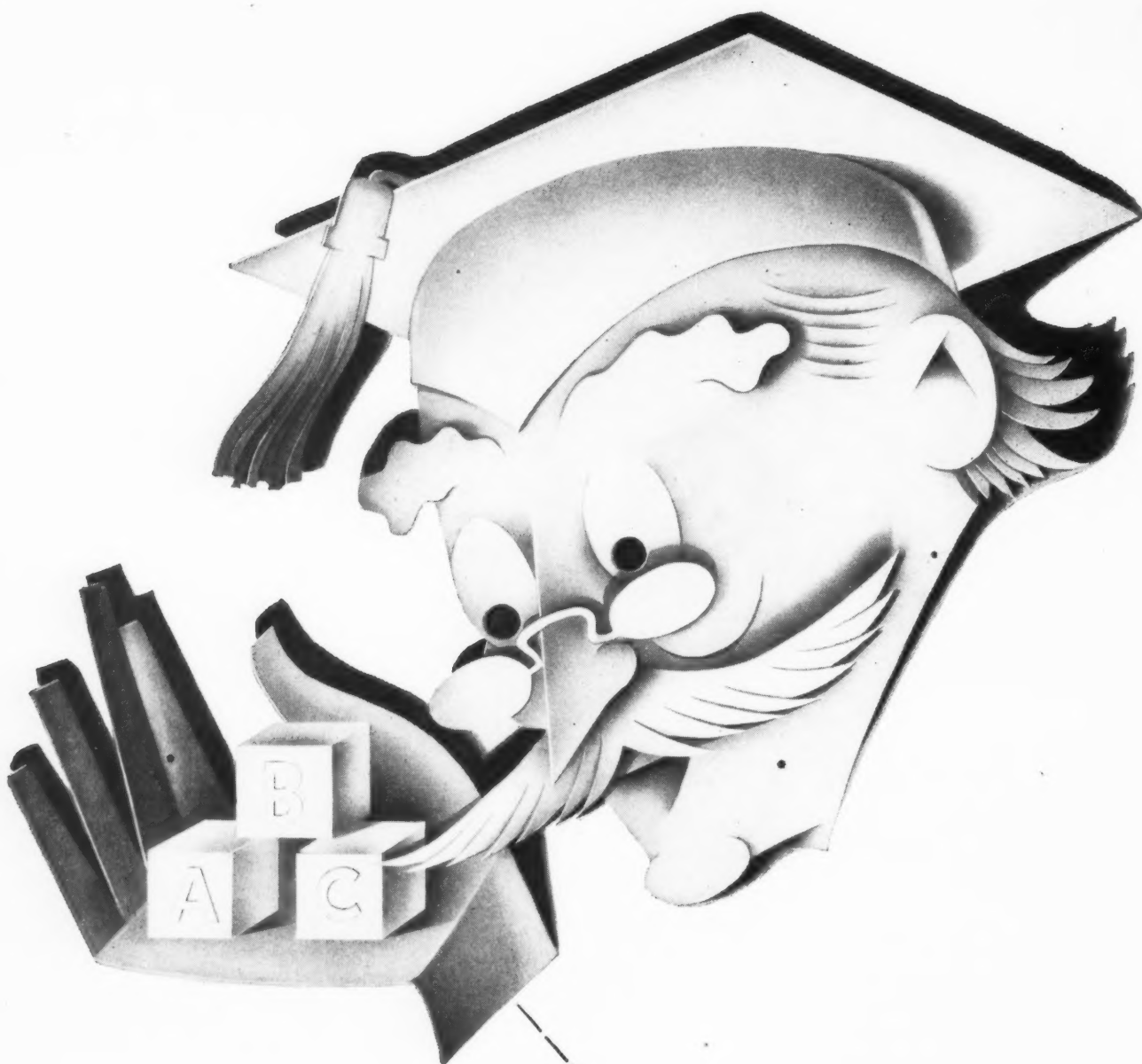
If you are introducing a new product, or modernizing an old one, Armstrong's vast background of packaging experience and performance is ready to help solve your problems. By analyzing your production and marketing problems, Armstrong can give unbiased design suggestions for your complete glass package. By planning your package as a complete unit, and by producing the container and seal, you get not only a completely harmonious package tailored to fulfil your individual requirements but also time-saving service. The container is made of high quality glass, and the closure is designed to seal perfectly whether it be cork, metal or molded cap, or crown. Design recommendations also include, when desirable, a du Pont CEL-O-SEAL* band.

No matter what problems come up in handling your order—legal, scientific, design, engineering, purchasing, traffic, or market research—you can always be sure of getting the best professional assistance from Armstrong's unusually large and well-staffed service departments. Contact your Armstrong representative or write direct to Armstrong Cork Company, Glass and Closure Division, 6512 Prince Street, Lancaster, Pa.



*REG. U. S. PAT. OFF., E. I. DU PONT DE NEMOURS & CO., INC.

ARMSTRONG'S GLASS and CLOSURES



EXPERIENCE

Know-how
to produce the best of the folding cartons,
to meet your every requirement.

CHICAGO
CARTON
COMPANY

4200 SOUTH CRAWFORD AVENUE • CHICAGO 32, ILLINOIS



Is Your Product an Impulse Seller?

Half of all buying decisions are made at point of sale—38 per cent solely on impulse, a recent super market survey discloses. Is your product dressed to benefit from these spur-of-the-moment buying decisions?

Many leading food packagers have found that sparkling Du Pont Cellophane is the best way to make their products effective "display" salesmen. Its visibility lets quality speak for itself in attracting shoppers and clinching sales.

What's more, shoppers know from experience that Cellophane keeps food fresh and flavorful.

That's why alert retailers give Cellophane-packaged products choice display. E. I. du Pont de Nemours & Co. (Inc.), Cellophane Division, Wilmington 98, Delaware.

Du Pont Cellophane

Shows what it Protects—at Low Cost

BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY



WEIGHTROL INDICATES.

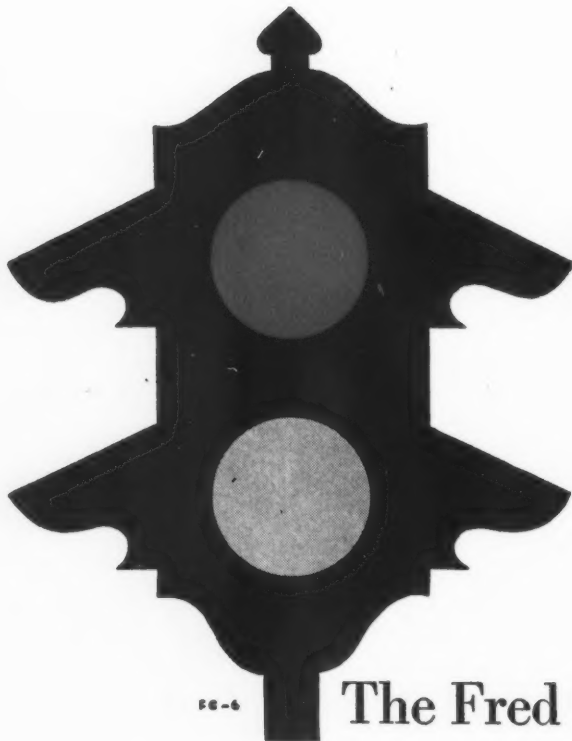
Amber means overweight; green, "O.K."; and red, underweight. From anywhere on the packaging floor you can check filling machinery performance at a glance. You can save by re-setting filling machines the moment weight varies.

WEIGHTROL REJECTS.

Unders and overs can't get past Weightrol, if set for rejection. Give-away is cut and no underweights can slip by.

WEIGHTROL RECORDS.

Counters show number of packages checked in each classification.



STOP

off weight packages

the new automatic weight
indication and control device for
package filling machines reduces
give-away to absolute minimum

The Fred Goat Co., Inc.

ESTABLISHED 1893

DEPT. M. P.

316 DEAN STREET, BROOKLYN 17, N. Y.



MARK CROSS has a way with men — and DUREZ

● When Mark Cross decided to introduce the "Cross Country" line of fine toiletries for men, it could be counted on to approach the problem with a thorough knowledge of the customer and the way to please him (and her). Generations have learned to know the name Mark Cross as a symbol of good taste in design as well as of excellent serviceability.

Recognizing the unusual merchandising value of phenolic plastic containers, Mark Cross has packaged an

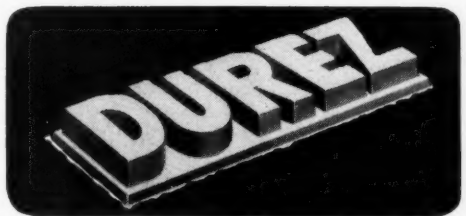
impressive group of products in Durez, molded by Norton Laboratories, Lockport, New York. Four Durez containers are used . . . for talcum, after-shave powder, shaving stick, and shaving bowl. Bottles of simple, round design have private-mold Durez caps, knurled with a masculine grip, as do the after-shave powder and shaving stick containers.

What Durez Offers

Durez phenolic compounds possess an

impressive array of the characteristics that count. Eye-appeal, non-bleeding finish, excellent moldability, impact strength, and resistance to moisture, mild acids, and alkalies may all be important in solving your packaging problem. Durez has them all.

Our 26 years of specialized experience with the phenolics are available to you and your custom molder . . . Durez Plastics & Chemicals, Inc., 2512 Walck Road, North Tonawanda, N. Y.



PHENOLIC
RESINS

MOLDING COMPOUNDS

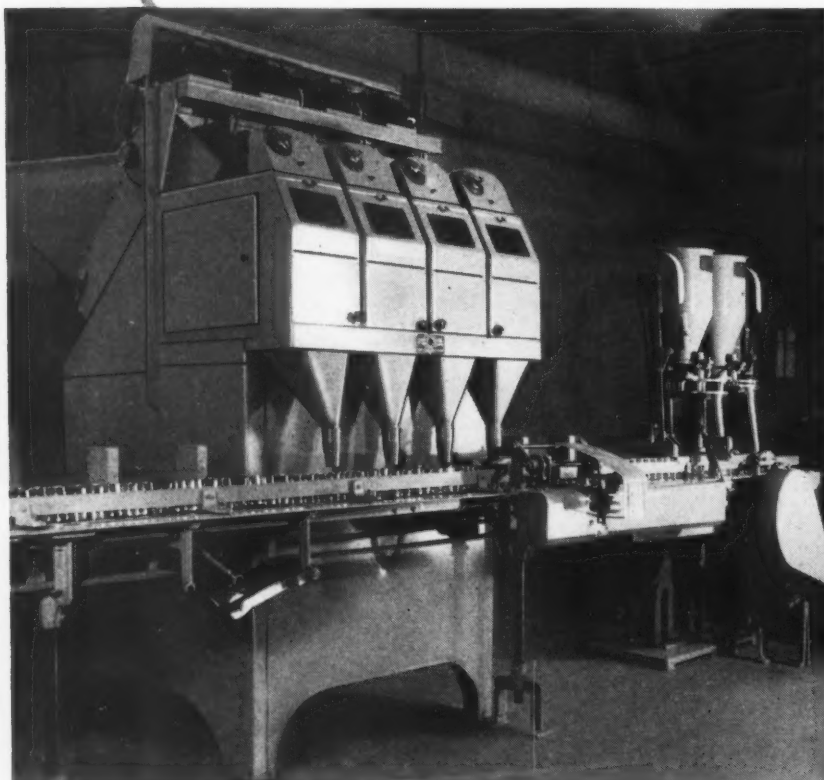
INDUSTRIAL RESINS

PROTECTIVE COATING RESINS

PHENOLIC PLASTICS THAT FIT THE JOB

Let Triangle cut your packaging costs!

If your problem is packaging dry products—Triangle offers the solution. Everything from crackers to cranberries . . . beans to potato chips . . . are being packaged by Triangle "Elec-Tri-Pak" Vibratory Feed Weighers with extreme accuracy, labor-saving speed and gentle handling. Machines are available in fully-automatic and semi-automatic models which weigh and fill from 10 to 100 packages per minute, depending on your requirements. Fill cans, bags, cartons, jars and envelopes. An exclusive vibratory feed handles delicate products without breakage. Change-over to different product and package sizes is quick, easy, because machines are self-emptying. Fractional adjustments in weight can be made while machine is in operation by means of Acrometer Weight Adjustment. Here is modern packaging at its best . . . a far cry from ordinary methods. Bring your packaging up-to-date and save money with these simple . . . easy to operate . . . accurate . . . labor saving machines.



HERE'S AN EXAMPLE OF WHAT TRIANGLE EQUIP- MENT CAN ACCOMPLISH . . .

Continental Foods, Albion, N. Y., faced the problem of weighing and filling very small amounts of THREE DIFFERENT INGREDIENTS into cans at a production rate of 60 to 65 cans per minute. Triangle answered the problem with the four-section Triangle Elec-Tri-Pak Vibratory Feed Weigher at the left which accurately weighs and fills $\frac{3}{4}$ OUNCE of $1\frac{1}{2}$ -inch long straight noodles into cans and two Triangle Model SPA fully-automatic fillers shown at the right. The first deposits $1\frac{1}{4}$ ounces of seasoning powder into the cans; the second deposits $\frac{1}{4}$ ounce of dehydrated vegetables. The entire unit is synchronized and completely automatic. "No-can, no-fill" control prevents spillage of material if the flow of empty cans is interrupted.

Whatever your packaging problem, consult Triangle. Write for NEW ELEC-TRI-PAK BULLETIN giving complete data.

TRIANGLE PACKAGE MACHINERY CO.

907 N. SPAULDING AVENUE, CHICAGO 51

SALES OFFICES: NEW YORK — PITTSBURGH — LOS ANGELES

SAN FRANCISCO — MEMPHIS — DALLAS — JACKSONVILLE

Packages that *Merchandise*

Packaging today must do more than protect your product — it must display it — glamorize it — sell it. Typical of this sound approach to modern packaging are the dual purpose Blanket Bags created by Clarvan. In addition to providing instant identification, sparkling beauty and positive protection, they furnish an extra measure of utility, by serving as de-luxe storage bags throughout the life of the blankets.

An extra value that means extra sales.

Here's a merchandising angle worthy of your consideration. Perhaps you too have a product that lends itself to a similar packaging technique — where product protection, point-of-sale beauty, and functional utility can be skillfully combined to create a merchandising sensation.

Contact a Clarvan packaging specialist now, for suggestions and recommendations on your products. We would welcome the opportunity of working with you.

Growing Evermore Popular
EVERHOT AUTOMATIC
ELECTRIC BLANKET
Swartzenberg
Manufacturing Co.



Sales Building

- ▶ Crystal Clear Plasticoid* permits instant identification.
- ▶ Sparkling clarity enhances beauty.
- ▶ Free premium in the form of De-Luxe Storage Bag.
- ▶ Complete protection during transit, storage and display.
- ▶ Materials and workmanship unconditionally guaranteed.

* Made of Vinylite Brand Plastics
Approved by Better Fabrics Testing Bureau.

Packaged for
SONATA BLANKET
Orr Felt & Blanket Co.



CLARVAN

C O R P O R A T I O N

712 W. MORGAN ST.



MILWAUKEE 1, WIS.



CONTINENTAL SERVES BEHIND THE SCENES

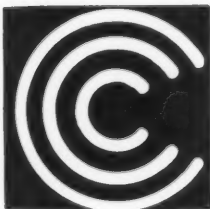
— BEHIND THE LABELS OF AMERICA'S FINEST PRODUCTS

In package design, eye appeal means buy appeal! That's why the beauty and rich color of Continental lithography play such an important part in increasing the popularity of our customers' products.

Just as the cans themselves provide the ultimate in product protection, smartly designed labels do a first class selling job.

Down through the years our skilled lithographers have earned an enviable reputation for faithful reproduction of customers' designs. From behind the scenes they have made many a product stand out on store shelves.

When you bring your packaging problem to Continental you are assured of sturdy construction, modern design and fine lithography. It's no wonder the famous Triple-C Trademark means "best in quality—best in service" to so many manufacturers.



CONTINENTAL
CAN COMPANY

100 East 42nd Street, New York 17, N. Y.

MODERN PACKAGING

**ALL THE COLOR THAT IS CHRISTMAS
IS INHERENT IN BOX WRAPS OF**

Kromekote^{*}

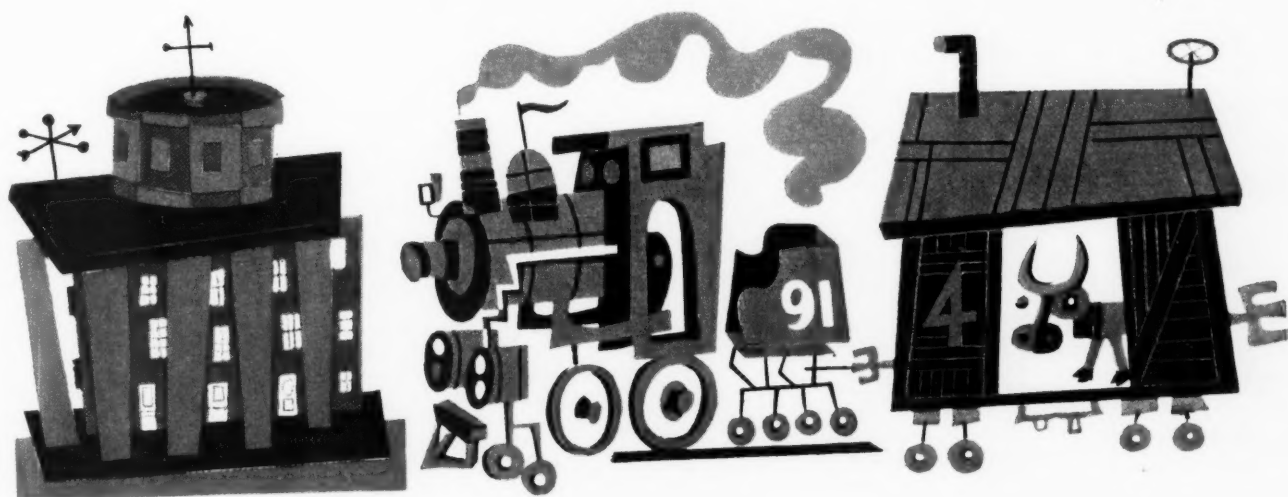
REG. U. S. PAT. OFF.



THE CHAMPION PAPER AND FIBRE COMPANY  HAMILTON, OHIO

District Sales Offices: NEW YORK • CHICAGO • PHILADELPHIA • DETROIT • ST. LOUIS • CINCINNATI • ATLANTA • SAN FRANCISCO

*Champion's Cast Coated High Finish Paper



J. Flora '47

Artist - James Flora, native of Ohio

OHIO — annual purchases: \$5½ billion — mostly packaged.

CONTAINER CORPORATION OF AMERICA



PAISLEY PRODUCTS INC. 1770 Canalport Ave., Chicago 16, Ill.
630 W. 51st St., New York 19, N. Y.

Gentlemen: Please send me free Technical
Service Bulletin No. 19 giving complete in-
formation on Paisley Flatlack Non-Warp Glue.

IRM _____
UYER _____

CUT COSTS WITH FLATAK.. REMARKABLE NEW ANIMAL BASE NON-WARP GLUE!

Clear, non-staining FLATAK works with amazing new efficiency, on every type of wrapper . . . plain, varnished, foil, kraft papers, and all paperboards. Machines beautifully, too. Doesn't gum or ball up and is easy to apply. Materials lay *flat*, without curl or warp. FLATAK eliminates waste when the work is halted for brief periods.

Test FLATAK in your own plant. Send for a trial 100 pound shipment. We'll ship *at once* at the surprisingly low 500 pound quantity price. Start in *now* enjoying ALL the savings and ALL the superior working qualities of this vastly improved animal base, cake form, non-warp glue. Or mail the coupon above for our Technical Service Bulletin No. 19.

Paisley
SCIENTIFIC
ADHESIVE SERVICE

PAISLEY PRODUCTS INCORPORATED
1770 CANALPORT AVE., CHICAGO 16, ILLINOIS
620 WEST 51st STREET, NEW YORK 19, NEW YORK

Paisley
SCOTT'S
ADHESIVE

BULLETIN No. 19

NEW YORK ADHESIVE BULLETIN

FLATAK NON-WARP GLUE
FOR PAPER BOX MANUFACTURING

INTRODUCTION

Gift removal glues have been known and used from the days of history, the ancient Egyptians, when construction of the pyramids was in progress.

FLATAK non-warp

INTRODUCTION

[illegible][illegible]

An important virtue of FLATACK is its ability to take full advantage of 100% of the available machine time. This results in extra coverage and mileage which lowers cost even further. Being substantially motionless and requiring extra labor cost even less. FLATACK is the most efficient and economical way to make all types of road and surface work.

FLATACK is used for a wide range of paper boxes used in packaging. In the trade, the clearer a color form gets, the better it is. FLATACK spread, the ability to spread out in a microscopic thin film without wrinkling or leaving bare spots. This gives greater strength to the product and further explains the reason why FLATACK is the most important of this splendid new line. This gives greater strength to the product and further explains the reason why FLATACK is the most important of this splendid new line.

Additional information:

CO. CHICAGO

How costs the glue collector exactly a uniform "cutrate" shows working that the glue is close and merchandise, making it available for this all up and is easy to adjust gum stock values.

the machine, since glue will hold any thickness of film as the glue strains on the machine. As glue doesn't stretch or warp and even though the machine is slow or adjusting the machine is slow at every step and releases a long the same.

the proper "lock" at the time. Then when placed on the scale, the thermometer instantly and at the discharge end for a

Keep temperature of glue between 140 and 160 Deg. F. Never mix temperatures for a longer time than 30 Deg. F. quickly remove the hot glue pots heated by the fire stream as they are used.

Keep glue pans and syringe
If glues are used too cool room
also comes frozen mixing glue in a
crusting can be kept down by
oil on the inside of the
"oil can"

The practice of adding preservatives should be avoided, as the common fatty acid controlled preservatives should be discarded. The preservative should always be used for should be the sole in handling.

the operator remembers to add more melted glue, and with accurate continuous benefit from the storage roll. Secure prime cost reduction by the process itself. Excessive glue is repelled by the machine from a melted glue, and with accurate continuous benefit from the storage roll. Secure prime cost reduction by the process itself.

As most of us get a slice of steak with the morning porridge each operating on an accurate thermometer scale, we can give the glow pen a try. At end of day a slice of steak will prove to keep a cross train forming a proper heat. Use a hot water bottle to give the glow pen a try. The glow pen is accurate thermometers on a scale, as.

These adhesives are extremely fast-drying, and it is surprising what good handling animal glue adhesives.

There's a laboratory developed
tested and controlled PAISEY
Swissmade Adhesive
for practically every labora-
tory, manufacturing, work-
shop, or home use.

work it is not as
it can be ap-
plied, pointing
out operations
etc., etc.

PRODUCTS INCORPORATED
Resin Adhesives

16, Ill. + 630 W 51st STREET, NEW YORK

1990

CORPORATION
Related Chemical Products

YORK 19, N.Y., PHONE CO

MODERN

MODERN

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Journal compilation © 2006 Blackwell Publishing Ltd

PAISLEY PRODUCTS INCORPORATED

Manufacturers of Glues, Pastes, Resin Adhesives, Cements, and Related Chemical Products

1770 CANALPORT AVE., CHICAGO 16, ILL., PHONE CANAL 2220 ★ 630 W. 51st ST., NEW YORK 19, N.Y., PHONE COLUMBUS 5-2860

Take your choice

FROM DOBECKMUN "STANDARD SIZE" CELLOPHANE BAGS

260 Standard Sizes,
—eight basic shapes
—variable lengths,
printed or unprinted



Send for samples—Ask us for samples and see for yourself the high quality and fine appearance of Dobeckmun Standard Size bags, printed or unprinted. Better still, send us samples of your present bags and quantities required. We'll show you how you can obtain these 3-way benefits. *The Dobeckmun Company, Cleveland 1, Ohio, West Coast Division, Berkeley 2, California.*

DOBECKMUN

◆ Self-selling packages in processed films and foils ◆

Branches: Boston, Chicago, Cincinnati, Los Angeles, New York, Philadelphia, San Francisco and Seattle. Representatives everywhere.

New engineering approach offers major advantages to cellophane bag users. From 260 "Standard Sizes" in eight basic shapes with variable lengths, you can match or closely approach your present bag dimensions . . . and capacities can be held exactly to your requirements. Let us show you, by samples and estimates, how you can gain these 3-way benefits, with no radical changes in your present methods.

1. **Savings up to 15% or more**
... made possible by mass production methods. We'll give you definite figures to compare with your present costs . . . even if you are now making your own bags.
2. **Special features**
of these single-wall, square bags give your package more sales appeal, insure bag quality. Reliable, glued construction with moisture-proof cellophane or other films provides adequate product protection.
3. **Faster service**
results from standardization, fewer intricate machine adjustments, less need to wait for special widths of film. Contract deliveries can be matched to your production schedules.

LAYOUT PRINTED PAPERS

(A)

IN ROLL FORM

Marked for electric-eye cut-off

(B)

IN SHEET FORM

Cut on our own electric-eye equipment

Paper of this type may be printed to any repeat up to 36 in. wide and in one, two, three, or four colors by gravure. Dress up your packages by having the layout printing an integral part of the overall design. Your inquiry is invited.

DECOTONE PRODUCTS

DIVISION

Fitchburg Paper Company

PACKAGING PAPERS *Converted Papers* SPECIALTY PAPERS

FITCHBURG, MASS.

The Seasons Best



Yes, Fall, Winter, Spring and Summer
the set-up box is your best bet
for added sales. Its take-home
value, ease of shipping and product
protection express your good wishes in every
package. Investigate today the sales potential of
set-up boxes. You will find they rate a 4 out of 5 "sooner" preference.
The Season's Best to you, with all good wishes from . . .



NATIONAL PAPER BOX MANUFACTURERS
Association

AND COOPERATING SUPPLIERS
Liberty Trust Building, Philadelphia 7, Penn.

FOR INFORMATION OR SERVICE • CONSULT YOUR NEAREST SET-UP BOX MANUFACTURER

THE BEST THINGS IN LIFE START OUT SMALL...

IDEAS... like babies... start out small. We, here at Heekin, have an idea that we can help you in your Metal Can problems through improved package design, improved adaptation of color, improved re-styling of shape and design. Heekin Lithographed Metal Cans carry all sorts of merchandise to market—cookies and lard—pharmaceuticals and candy—chemicals and margarine—potato chips and peanuts. We are glad to discuss your Metal Lithographed Can problems anytime, anywhere—without obligation.



HEEKIN CANS

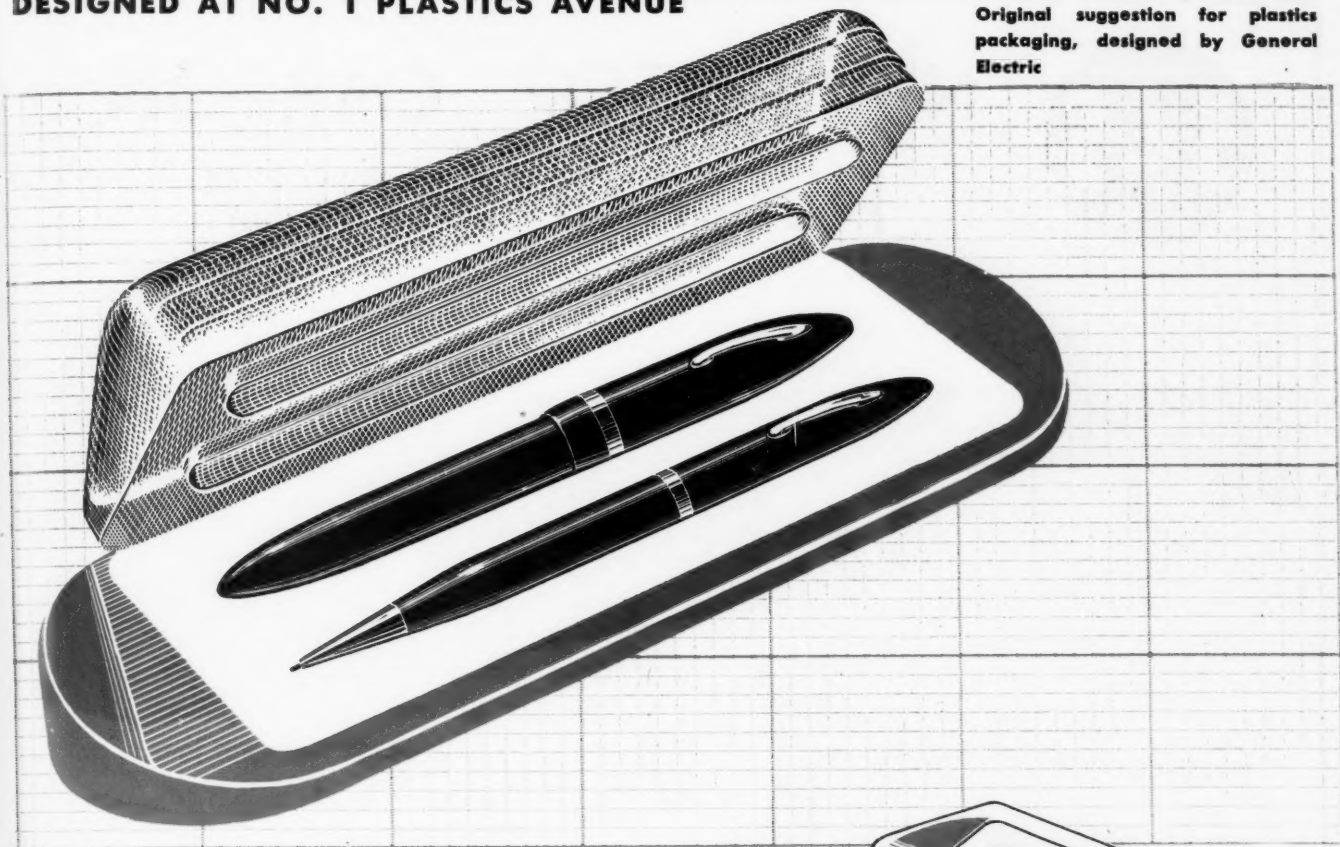
With Harmonized Colors

THE HEEKIN CAN COMPANY, CINCINNATI 2, OHIO
LITHOGRAPHERS OF METAL CANS SINCE 1901



DESIGNED AT NO. 1 PLASTICS AVENUE

Original suggestion for plastics packaging, designed by General Electric



A NEW SALES POINT FOR PEN SETS...

Plastics Packaging



Here's a double-duty package to help sell pen and pencil combinations. With its transparent plastics top, it makes an effective point-of-sale display. And customers will appreciate its value as a smart desk set for home or office.



**MOLDED-IN RECESSES
HOLD PEN AND PENCIL**

This cross-section view shows how recesses molded into this handsome plastics package hold the pen and pencil in place.

It's just one of the plastics packaging ideas to be found at No. 1 Plastics Avenue. This design—or one

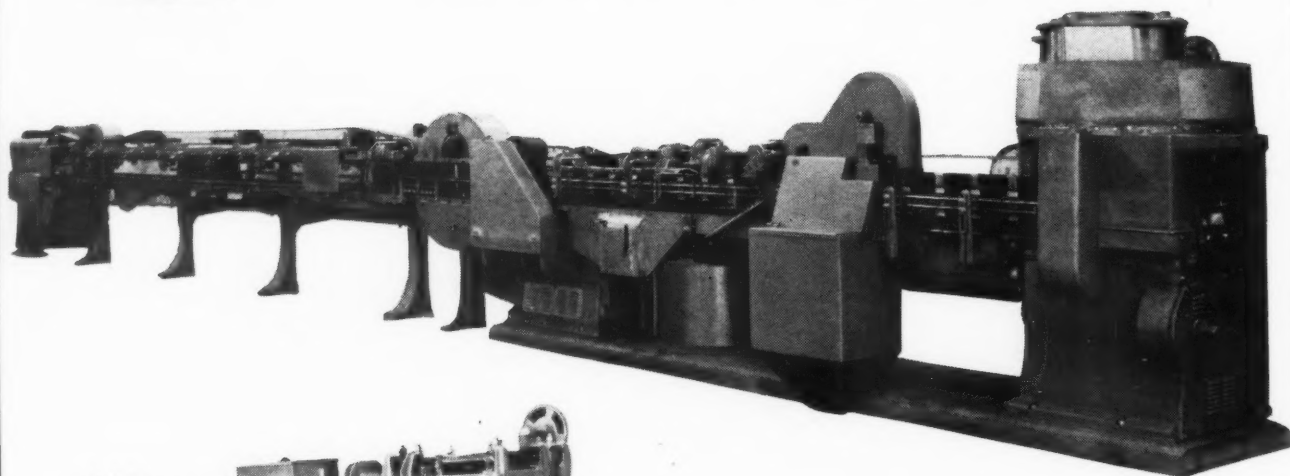
drawn especially to meet your own specifications—can be yours as a part of General Electric's *complete* plastics service. Or G.E. can work from your own designs, if you prefer. And since General Electric molds *all* types of plastics materials, they can recommend without bias the one which will work out best for your particular job.

Plastics packages and displays are helping to sell all kinds of merchandise. Have you investigated how plastics might add sales appeal and utility to the container for your product? Talk it over with General Electric, the world's largest manufacturer of finished plastics products. Write to Section P-9, Plastics Division, Chemical Department, General Electric Company, 1 Plastics Avenue, Pittsfield, Massachusetts.

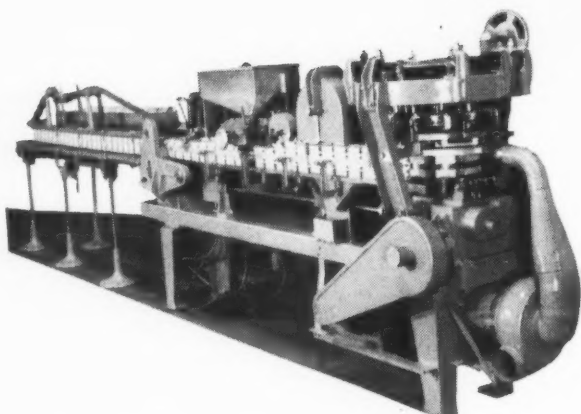
GENERAL  ELECTRIC
CD47-P9
EVERYTHING IN PLASTICS



NEVERSTOP CARTON FILLER & SEALER



Above:
Model "A" High Speed Carton Filling and
Sealing Machine. Production 160 per minute.



Left:
Model "E" Carton Filling and Sealing Ma-
chine. Production 60 per minute

The "Neverstop" automatically feeds and seals cartons while in continuous motion, so that high speed production is obtained with slowly moving mechanisms. Volume filling is also accomplished without stopping the moving carton.

The "Neverstop" is extremely adaptable. Weighing or auger feed filling machines can be combined with the "Neverstop" when materials require their use. For free flowing materials having nearly constant volume per pound, the filling mechanism is incorporated in the machine, securing the advantages of less cost and floor space. For smaller cartons a made-up bag (liner) may be automatically fed and inserted into the carton before filling and, afterward, automatically folded and crimped or heat sealed.

The "Neverstop" Machines are furnished for either hand or automatic carton feed. An extremely tight seal is assured, top and bottom, since both are made in the same way. All carton flaps are glued, the first wide flap folded being crowded over into the fold of the second wide flap as it is folded down.

Detailed information will be furnished upon request. A sample package will help in specifying equipment.

STOKES & SMITH CO.
PACKAGING MACHINERY PAPER BOX MACHINERY

FRANKFORD, PHILADELPHIA 24, PA.

FILLING • PACKAGING • WRAPPING MACHINES

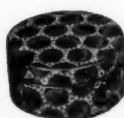
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On the Champs-Elysees... Fifth Avenue... Wilshire Boulevard... Rowell adds exciting charm to cosmetic boxes for face and dusting powder.

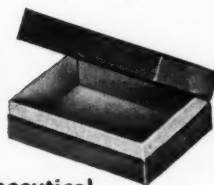
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boxes



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experience



E. N. Rowell Co. Inc.
Manufacturers of Fine Paper Boxes

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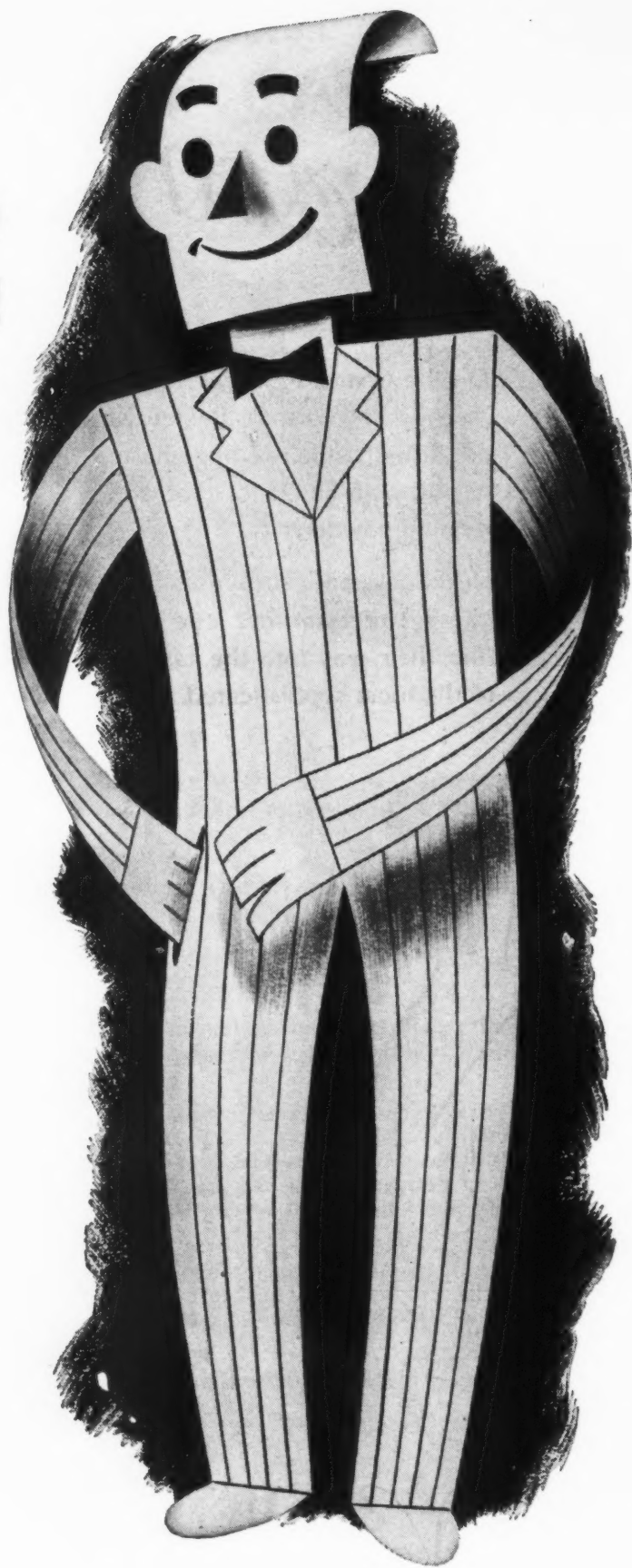
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NEW PRODUCTS DIVISION

THE MEAD CORPORATION

CHILLICOTHE, OHIO

MODERN PACKAGING



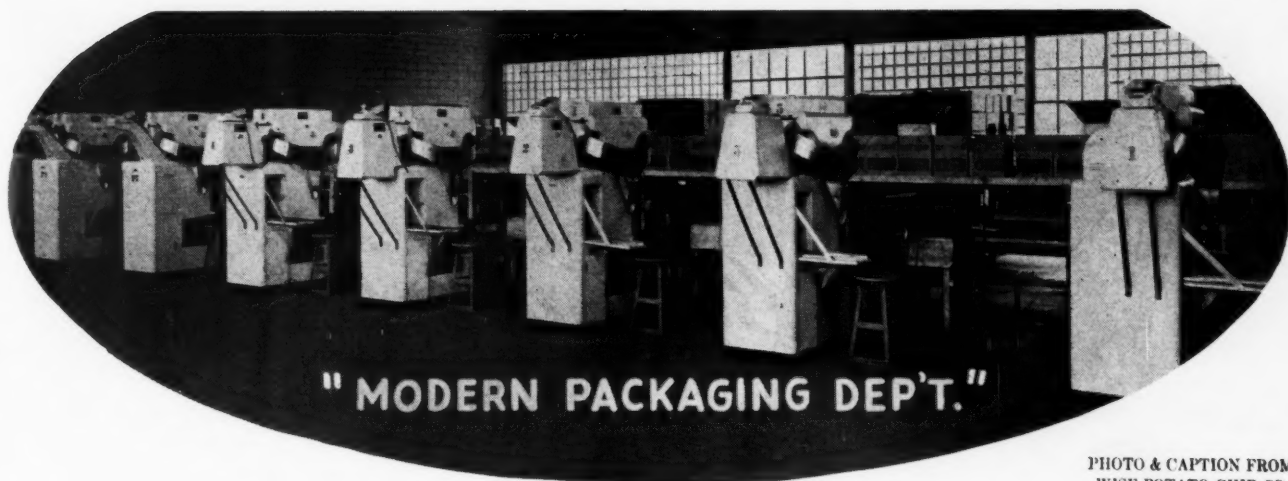


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When one of the world's largest makers of one of the most difficult products to package puts his stamp of approval on a new machine, that machine is worth your consideration. Especially when over 70 other users also report satisfactory results. Get the full story now on the Hy-Tra-Lec Automatic Weigher. Developed and manufactured by Wright's Automatic Machinery Company, pioneer since 1893 in automatic packaging machinery and a division of the SPERRY CORPORATION.

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Machinery Company ★

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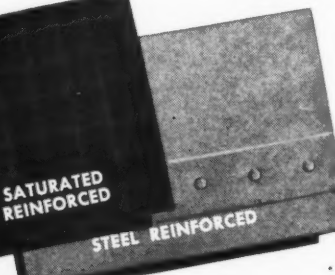
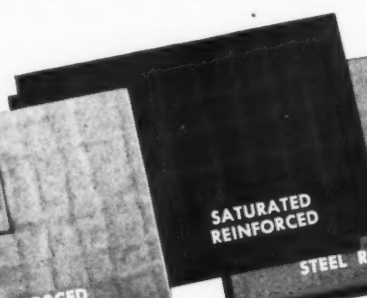
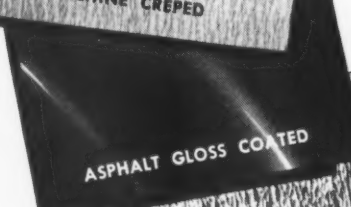
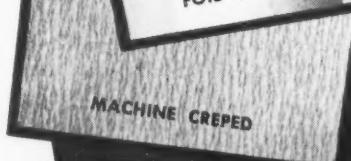
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SAVES MONEY 3 WAYS

1. because it does many filling jobs

It handles all kinds of pastes and powders.
It fills all kinds of rigid and flexible containers.
It fills any size container from 1/3-ounce to ten pounds.

2. because it operates faster

In ten seconds—without tools or mechanic—it can be changed over from a 1-ounce to a ten-pound package.
It can keep up with the fastest operator.
There's no foot pedal to slow down output.
Users have actually clocked filling speeds of 70 five-ounce containers per minute.

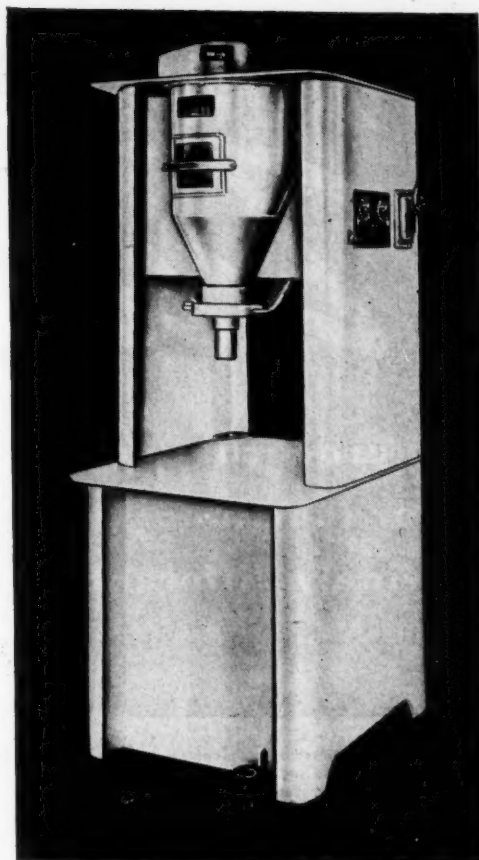
3. because it costs less to maintain

Moving parts can't get clogged with powder or paste. All of them (drive-motor, controls, exclusive metronome timer) are located above the fill tube.
Special design by Cragar completely eliminates clutch breakage and overheating.
Moving parts ride on sealed ball bearings.

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Model 6-A Tube and Jar Filler



Hand operated for smaller production runs. . . . Fills tubes and jars with pastes, ointments, semi-liquids. . . . Interchangeable nozzles. . . . Speeds of 20-30 tubes per minute.

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Gentlemen: We want more information on how the Rodgers Filler can cut costs and boost speeds of our package filling line. Please send your free descriptive Bulletin M-12.

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Riegel's SPECIAL NON-TRANSPARENT Diafane

a practical and economical material
for functional packaging of
widely different products



Uses an opaque Diafane made with a special glassine base, heat-seal coated one side, aniline printed. Package made on a Pneumatic Scale Corp. machine (tea bag style).



Heat-seal carton overwrap of special opaque Diafane, coated two sides with thermoplastic lacquer, aniline printed.



Drumhead heat-seal of special opaque Diafane, coated one side to seal to metal with a very short dwell. Used on a special machine designed by American Can Company for their own use.



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Inner package made on a Stokes & Smith Transwrap machine (fin-type), using two webs of special opaque Diafane, heat-seal coated one side.

tailor-made to your needs

Here are just a few of the strictly functional uses for Riegel's Non-Transparent Diafane...
available either printed or plain in many standard grades...
or tailor-made to your specifications.

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It's the ideal container for Liquid Foods



- ★ *Designed especially for liquid foods*
- ★ *Transfers no foreign tastes or flavors*
- ★ *Clean and sanitary*
- ★ *Protects product goodness*
- ★ *Provides easy, quick access to contents*
- ★ *Easy to pour from*
- ★ *Available in 8 capacities*

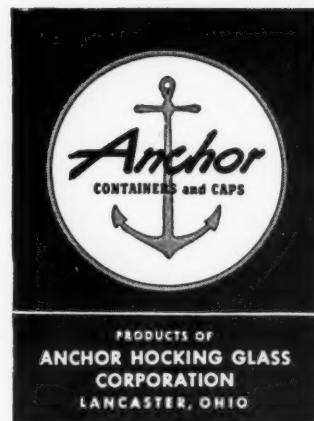
The ANCHORGLASS Stubby Round Bottle

FRUIT juices, syrups, sauces and salad oils must be delivered with all their original flavor, taste and goodness intact. As glass is an inert substance it cannot impart any foreign tastes, flavors or aromas. That is one reason why your liquids would be better packed in glass.

Then too, juices, syrups, sauces and oils are used over a period of time. And that is another reason why they should be packaged in glass—for the glass container provides easy, safe and quick access to

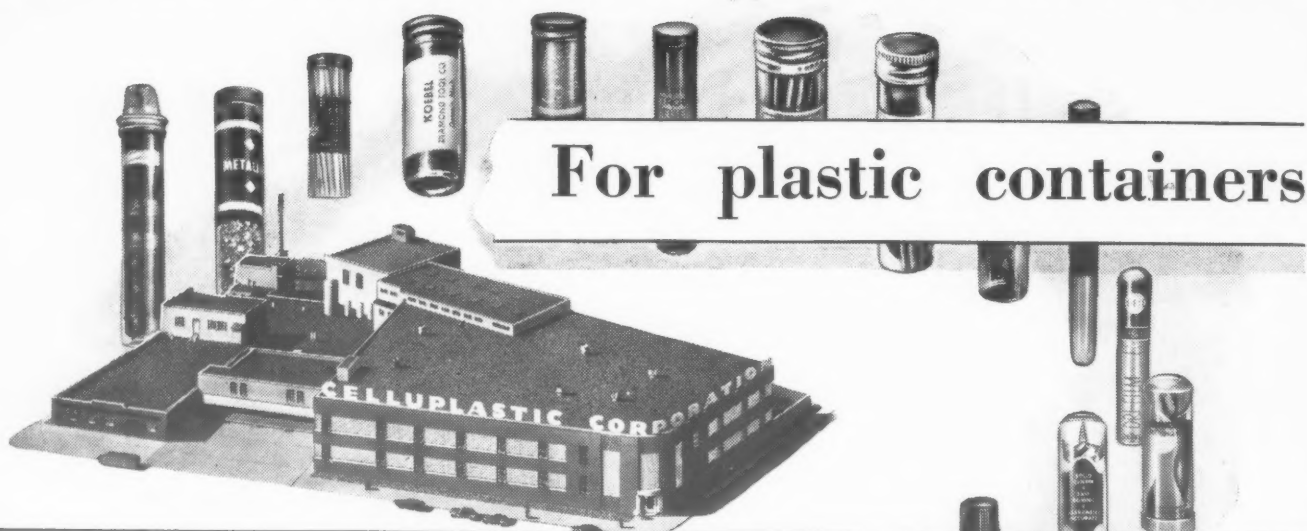
contents and can be resealed to protect the remainder indefinitely. In addition, glass containers guarantee 100% product inspection, are easy to pour from, and show the user when the supply is low and it is time to re-order.

Anchorglass Stubby Round Bottles are the ideal containers for your liquid products. In fact they were designed especially for them. And to most completely satisfy your needs they're available in 8 different capacities from 4¼ ounces to 33⅞ ounces.



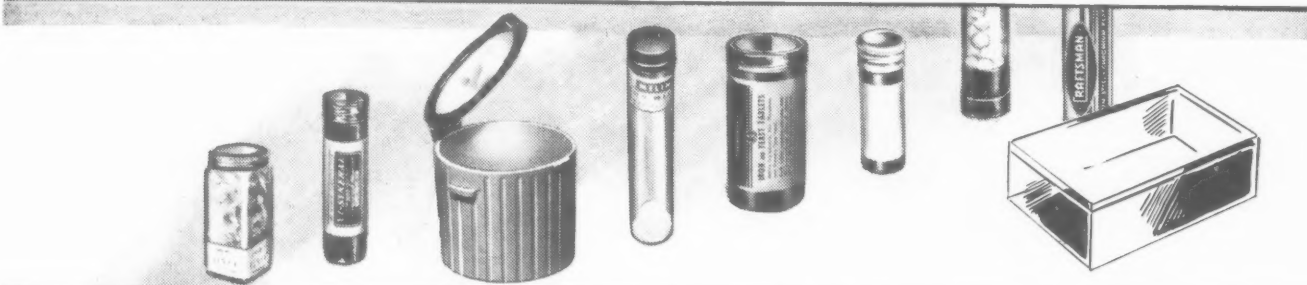
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Thursday evenings, entire CBS
network, sells all America on
glass-packaged products.*

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of any size, shape, color or design,



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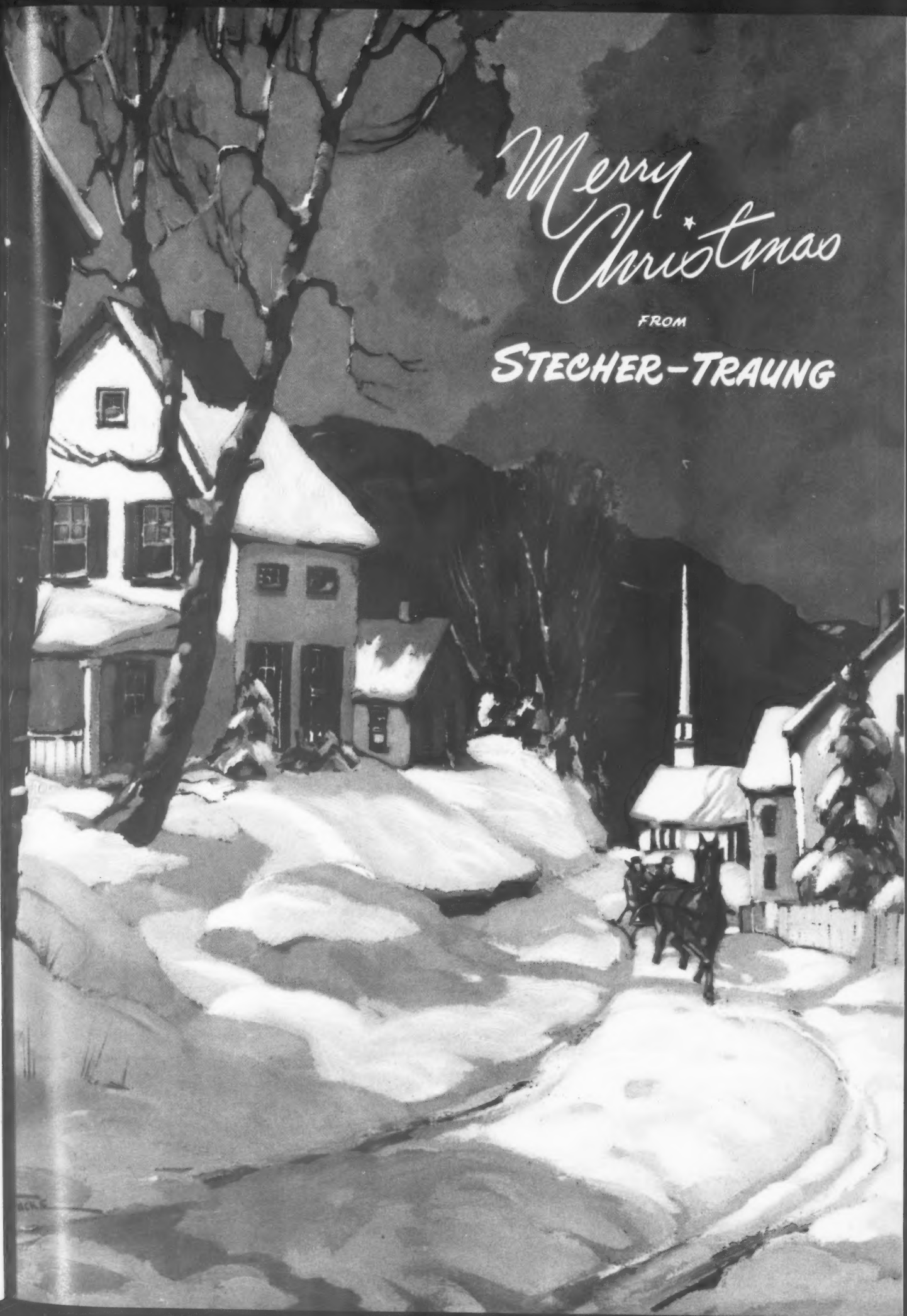
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*Merry
Christmas*

FROM

STECHER-TRAUNG





Walter T. Sacks, noted artist, was commissioned by Stecher-Traung to make the original oil painting reproduced on this and preceding page

FULL COLOR

THE STECHER-TRAUNG WAY

Many recognize the selling power of FULL Color, but not everyone knows how to take complete advantage of this dynamic sales force in labels and box wraps. That's where Stecher-Traung's long experience and merchandising "know how" prove immeasurably helpful . . . Get the facts on FULL Color—learn how your labels, box wraps and packaging materials can do a bigger selling job when lithographed the Stecher-Traung way in sparkling color.

FINEST FULL COLOR LITHOGRAPHY

LABELS BOX WRAPS SEED PACKETS
FOLDING BOXES ADVERTISING MATERIAL
MERCHANDISE ENVELOPES AND CARDS

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Baltimore, Boston, Chicago, Columbus, Harlingen, Los Angeles, Macon,
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THE *Silence* OF A PACKAGE...



SHOULD BE GOLDEN!

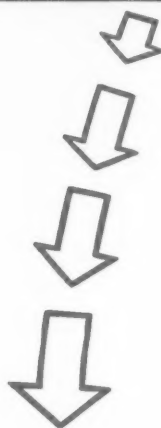
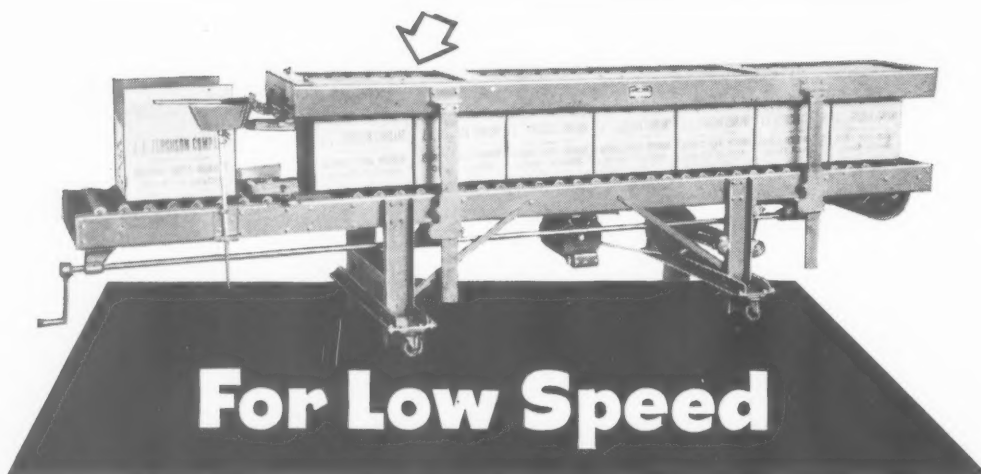
The silence of a package on the retailer's shelf or counter can be full of golden sales-opportunities for the manufacturer . . . provided it has the sales-lure that makes the shoppers reach for it instinctively.

- INTRIGUING SET-UP BOXES
- CREATIVE FOLDING CARTONS
- UNUSUAL MERCHANDISE COUNTER DISPLAYS
- SPECIALIZED PACKAGING
- TRANSPARENT PACKAGING

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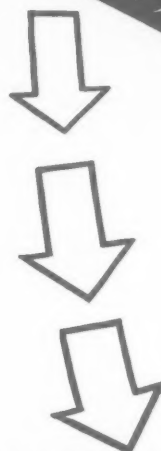
cme PAPER BOX COMPANY

STATE AT SIXTIETH STREET • CHICAGO 21, ILLINOIS



Whether your shipping case gluing and sealing operation is large or small, continuous or occasional, you will find PACKOMATIC case gluing and sealing equipment to help you.

Where many small runs must be handled daily—or where volume doesn't justify investment in automatic equipment—specify PACKOMATIC's hand-glue, belt compression sealer. Equipped with roller feed table, glue pot and brush, PACKOMATIC's hand-glue compression sealer is a practical, dependable and economical unit for semi-automatically sealing paper shipping cases.



PACKOMATIC
PACKAGING MACHINERY J.L. FERGUSON CO. JOLIET, ILL.

For large or continuous shipping case gluing and sealing operations up to 3,000 cases per hour—PACKOMATIC's Model D shipping case gluer, with belt compression sealer, reduces handling costs for many of the world's foremost package goods producers.

Adaptable to practically any production requirement or plant layout, built for varying operating speeds, and highly flexible in the application of adhesive, PACKOMATIC's *automatic* Model D shipping case sealer is an adhesive, time, labor and money saver.

Write for literature on this and other PACKOMATIC equipment, or see classified directory for nearest PACKOMATIC office. J. L. Ferguson Company, Route 52 at Republic Avenue, Joliet, Illinois.

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WIRZ applauds
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to P & G's new **Prell** Tube



"Radiant beauty in the handy new Prell Tube"

is making an irresistible appeal to women (and men!) all over America. WIRZ congratulates Procter & Gamble on the successful launching of its new Prell Shampoo in a completely adequate sales package . . . one that performs three important functions . . . a quality tube that protects, adds convenience, and increases the sales appeal of the product. WIRZ is proud to have cooperated with P & G's engineers in developing the design as well as in the production of the new Prell Tubes.

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A complete line of shipping room tools to seal with steel

(Nearly 800 models for stapling, tacking, and wire stitching)



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BOSTITCH Auto-clench seals tops of corrugated and fibre shipping containers *after* they are filled. No sealing blade to insert. Makes tight, firm clinch.



PORTABLE STAPLERS

FOR top sealing, bag sealing; fastening corners of fibre and corrugated containers. Great penetrating power.



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VARIOUS models for stapling and stitching bottoms of fibre and corrugated containers up to 34 inches deep. Foot and motor driven.



SELF-FEEDING HAMMERS

DRIVE staples like two-pointed tacks — one hand, one blow. Speed work attaching labels, tags, lining and covering crates and cases, tacking over barrels, etc.



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PLIER-TYPE

SEAL flexible corrugated wrappings . . . other light and fairly heavy containers. Easy withdrawal after staple is clinched.

BOSTITCHING

The use of the right stapling, tacking, or wire stitching machine and the most appropriate size and type of staple to achieve the most efficient fastening result.

Usually the fastest method . . . and most secure. Eliminates shipping room bottlenecks. Reduces damage claims.

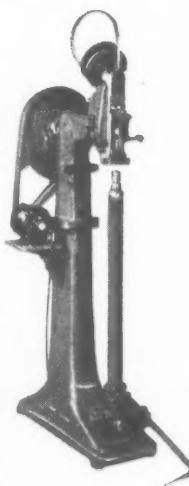
Bostitch provides not only machines for every kind of stapling and tacking job, but also machines suited to various production requirements and to the desired investment.

Users, starting with small, inexpensive equipment, can change to larger, faster Bostitch machines as conditions warrant. Experienced Bostitch field men, specializing exclusively in stapling, will be glad to discuss your requirements.

Please send literature checked: ☐ #175 Bag Sealing, ☐ #157 Carding, ☐ #132 Shipping. Bostitch, 504 Mechanic St., Westerly, R. I.



Bostitch Wire Stitchers—make their own staples from a coil of wire. Especially suited to large production.



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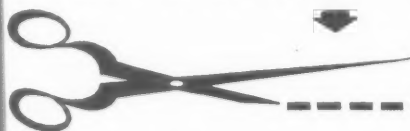
The MODERN PACKAGING ENCYCLOPEDIA is the only reference book which covers all phases of packaging. This book is of such complete scope and the information is of such superb quality that you really must buy and use this book before you can appreciate its value. Remember, there

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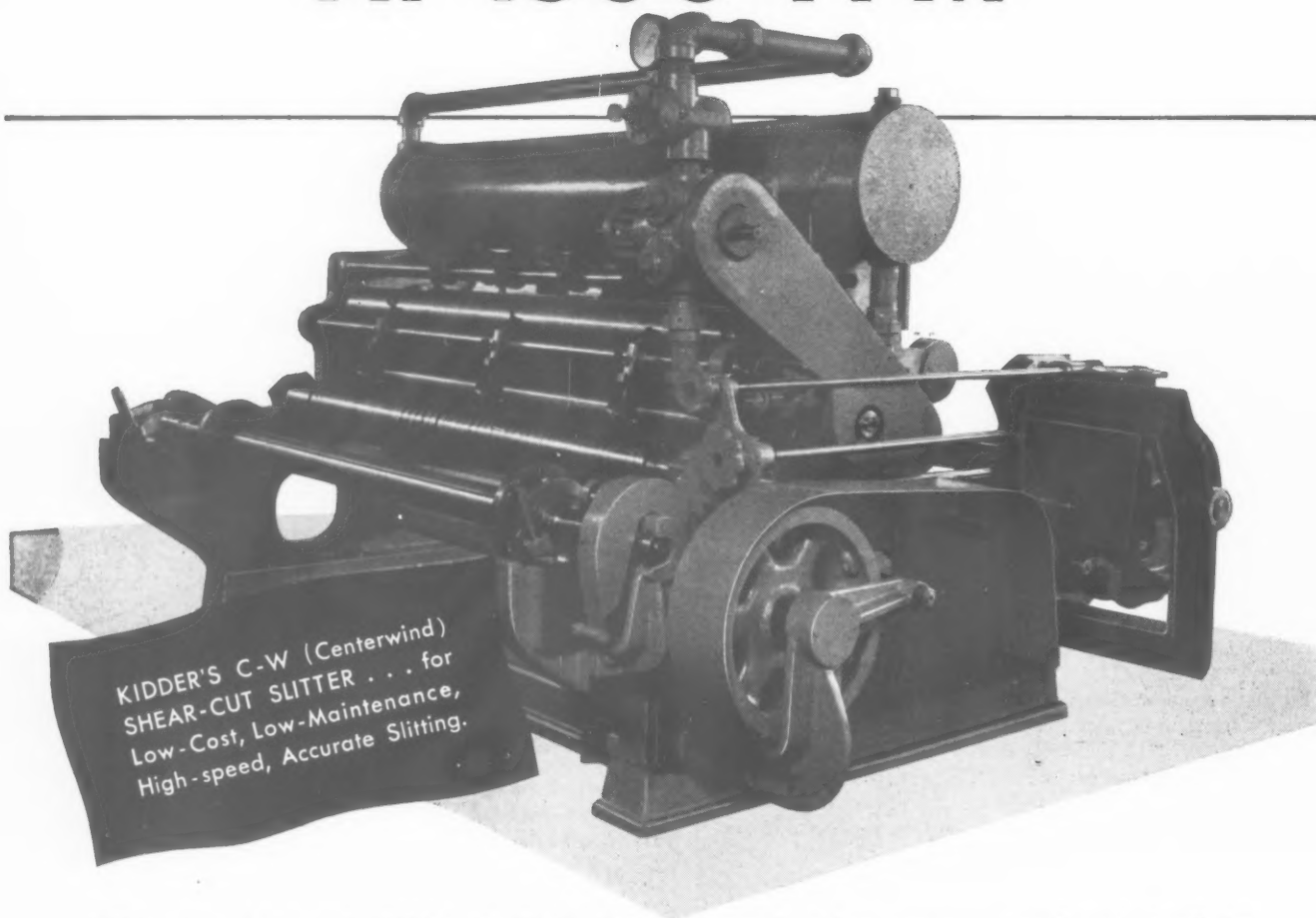
City..... Zone..... State.....

Type of product.....

20 CHAPTERS

TWENTY chapters of packaging know-how plus the directories of the packaging industry which tell where to buy—all this for only \$6.50, Canada, including postage and duty \$9.00, Foreign \$11.00. Send orders to: Packaging Catalog Corp., 122 East 42nd Street, New York 17, N. Y.

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The new, improved Kidder C-W Model Slitter delivers accurately-cut, dustfree rolls of processed stock in widths 2" or more at 1500 fpm. Rolls are never burred or interwoven . . . they fall apart by themselves. The centerwind principle, without rewind drums, allows slitting of most types of papers from light tissues to heavy-coated tag stocks.

Automatic Carriage — a Kidder exclusive — in which the carriage moves backward as the rewind roll grows bigger, assures constant, min-

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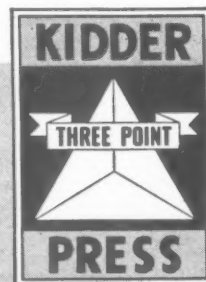
Automatic Hydraulic Tension Control — prevents interweaving. Kidder engineers have applied this principle to the C-W model to assure constant web tension. Simply set the desired tension on the dial and it is automatically maintained throughout the run.

Scissors-Action — Shear-type cutters, self-sharpening for low maintenance, cut the web cleanly.

KIDDER PRESS COMPANY, INC.
DOVER, NEW HAMPSHIRE

A. E. MARCONETTI
11 W. 42nd St., New York 18, New York

MACHINERY SERVICE CO.
P. O. Box 33, Los Angeles 11, California



Seal of Quality



- ★ Provides a dependable vacuum seal
- ★ For hot or cold packing
- ★ For sterilizing or processing
- ★ Pliable gasket effects friction side seal
- ★ Seals up to 250 packages a minute
- ★ Supplied nested for efficient handling
- ★ Easy to remove and reseal

the ANCHOR AH-N Cap

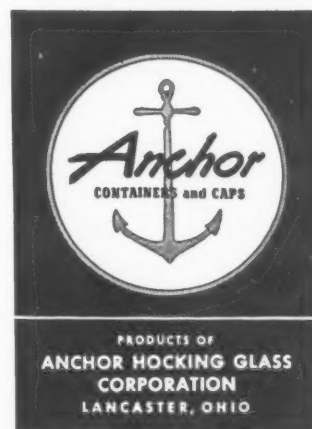
THE AH-N Cap is a quality closure for sealing all types of glass-packed food products that require a tamper-proof vacuum seal. It can be used to seal foods packed hot or cold, sterilized or processed.

The AH-N Cap provides a friction seal on the side of the glass finish by means of a thick, pliable sealing gasket. The tapered upper section of the container finish eliminates unnecessary friction in application, removal and reseal. That's why these caps can be quickly and easily removed with a lift-type opener, coin, the back of

a dull table knife or the bowl of a spoon.

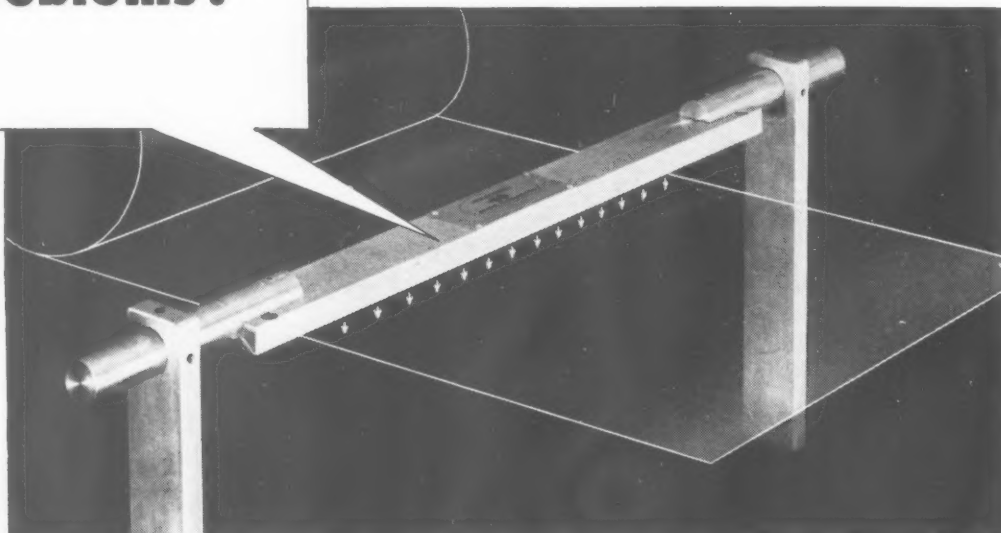
With this cap and the Anchor Steriseal machine, packages can be hermetically sealed under steam vacuum at speeds up to 250 per minute. Because caps are shipped nested you save on storage space. Filling the cap feed magazine is simplified. And nesting protects against shipping and handling hazards. All this adds up to more efficient production, high speed production and low production costs.

Standardize on AH-N Caps for a seal of quality.



*"Crime Photographer",
Thursday evenings, entire CBS
network, sells all America on
glass-packaged products.*

**Will this reduce
YOUR
static problems?**



Read what it's doing for **MILPRINT**

Here are excerpts from the letter above, by C. K. Billeb, General Works Manager of Milprint, Inc., Milwaukee:

"In the manufacture of bags from Pliofilm, acetate, or other similar high-static films, the troubles from static have been reduced to a minimum or eliminated altogether by the use of Ionotron Static Eliminator bars. The ideal bag machine treatment is to use three bars. One is mounted directly over the draw rollers, one across the tube travel between the bottoming cylinder and the segments, and one at the delivery so that finished bags pass under as they shoot into the delivery magazine."

"On rotogravure printers, the Ionotron can be safely used because it is explosion-proof. One bar across the web at each color unit keeps static eliminated sufficiently to prevent static fires and 'hugging' over rollers."

"On sheeters, or sheet-fed equipment, the Ionotron bar eliminates virtually all troubles caused by static. The bar should be mounted so that the sheet passes under it just before shooting into the jogger table. Another bar mounted across the web as it enters the cutter, or across the sheet travel as it enters the first operation, prevents plugging, faulty position, and other static worries."

Employing alpha radiation to "bleed off" static charges, the Ionotron Static Eliminator* is continuously and permanently effective. It requires no power connection, and there's no operating cost!

If static is interrupting your production . . . or causing irregularities in your products . . . or creating fire or explosion hazards in your plant, send us a description of the "trouble zone". We'll tell you what the Ionotron can do for you. No obligation. Write Dept. J6, U. S. Radium Corp., 535 Pearl St., New York 7, N. Y.

*Trade-mark reg. U. S. Pat. Off.



IONOTRON
Static
ELIMINATOR

Ohio Britone

machine clay-coated paperboard

accents the personal note
in package appeal

Some products are specifically *personal* in their appeal and application. They are bought at drug and cosmetic counters and used for personal appearance, or personal grooming. In no other group of products is "personality" in packaging so important to sales. Giving your package this clean-cut, bright-eyed quality of personality at its best is the special purpose for which Ohio Britone, our new machine clay-coated paperboard, was developed. On its fine white printing surface distinctive design speaks out with maximum sales appeal. To "make your package talk" specify Ohio Britone, a product of the complete and fully coordinated facilities of PLANNED PACKAGING.



THE OHIO BOXBOARD Co.

RITTMAN, OHIO

Manufacturers of paper board, folding boxes, corrugated and fiber shipping containers, and converted specialties
SALES OFFICES: RITTMAN • AKRON • CLEVELAND • CINCINNATI • PITTSBURGH • NEW YORK • CHICAGO
Capacity 500 tons daily



UPgrade your cartons...



COATED LITHWITE...A PRODUCT OF

while you

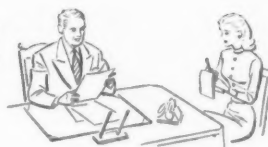
DOWN NET PACKAGING COSTS?

**THERE'S A GOOD CHANCE YOU CAN. HOW? WITH PRECISION-ENGINEERED
CARTONS OF COATED LITHWITE* (IT'S CLAY-COATED PLUS)**

Here's the UP story! Coated Lithwite is the revolutionary clay-coated board that makes more eyes reach for cartons on the shelf . . . and in mass displays. For Coated Lithwite is the clay-coated board that is made the modern way. Its clay coating is filmed on a quality base stock to produce a surface that is unusually white, bright, exactly level. That's why colors come up so brilliantly . . . why pictures reproduce with such true-to-life realism. Many of America's best known products are getting an important point-of-sale plus, today, in cartons of Coated Lithwite.

Here's the DOWN story! And it's a mighty important one, today. Cartons of Coated Lithwite are Precision-Engineered. That means all cartons are of exactly the same size, precisely scored, engineered in every way to perform better in high speed machines. Result? Fewer jammers. Fewer leakers. Less waste. Less idle time for machines and operators. And Coated Lithwite's more flexible, filmed-on clay coating assures folding, bending, scoring without shattering. Easier gluing, too. And its whiteness resists fading and discoloration in storage bins as well as on the shelf.

Write or Wire. You're looking for every possible way to slow down run-away costs, today. There's a good chance Coated Lithwite can help—and upgrade your cartons at the same time. A phone call, a letter or a wire will bring a Gardner-Richardson representative with the see-for-yourself facts.



THE GARDNER-RICHARDSON CO.

Manufacturers of Folding Cartons and Boxboard, Middletown, Ohio

*Reg. U.S. Pat. Off.

Sales Representatives in Boston, Chicago, Detroit, New York, Philadelphia, Pittsburgh, St. Louis



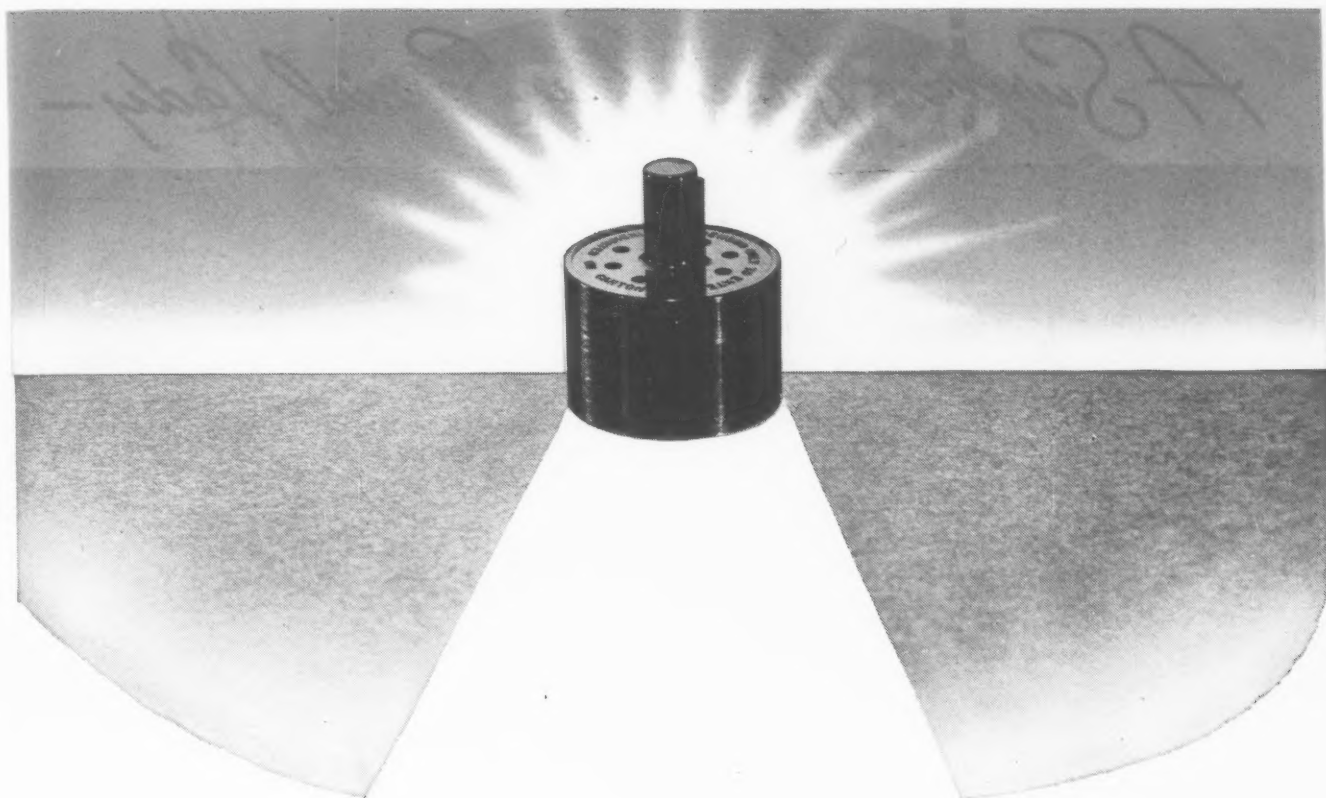
Season's Greetings

In this, our grand land of peace and plenty,
let you and I pause with our holiday-happiness
toast to include among our well-wishing, those
in lands less fortunate than we. May their
holidays be hope-brightened by America's
promise to help ... and may this promise find
early New Year fulfillment. Only as friends
of those in need, are we friends, indeed!

MANHATTAN PASTE & GLUE CO., INC.

Lion Brand Adhesives

425 GREENPOINT AVE., BROOKLYN, N.Y.



BIG MAKERS OF SMALL PLASTICS

For many years we have specialized in making plastic closures.

Now the automatic machines that mold these closures make millions and millions of small plastic items to fill a vast variety of needs.

Our high production standards, our extensive research, our long manufacturing experience—

mean that these thermosetting plastic units are turned out with dependability, efficiency, speed and economy!

If you need small plastic units in large quantities, we are ideally suited to serve you.

LOOK FOR THIS



TRADE MARK

PLASTICS DIVISION

OWENS-ILLINOIS GLASS COMPANY

TOLEDO 1, OHIO

BRANCHES IN PRINCIPAL CITIES

A Surprise for a Very Special Lady—



THE man who takes home a jar of these delicious Russell McPhail Confections takes a short cut to a little lady's heart. The closure will please Mother, too, for she knows how to remove it, and it's so easy to replace. ♦ McPhail Candy Corporation, with factories in Oswego, N. Y., Chicago, Ill., San Francisco, Cal., Atlanta, Ga. and Jacksonville,

Fla. is another of the prominent manufacturers who have selected Crown Closures for their product. They've found that Crown Screw Caps assure trouble-free application on the production line and dependable sealing. Crown Screw Caps are made to carefully controlled tolerances and have the patented Deep Hook Thread construction . . . a thread that grips UNDER the glass thread of the container and gives greater sealing pressure with any given amount of application force. Crown Cork & Seal Co., Baltimore 3, Md. *World's Largest Makers of Metal Closures.*

CROWN CLOSURES



Protection Unlimited—in

Gaylord Boxes

from your production line—

TO TRAIN	—WHOLESALE
—TRUCK	—RETAILER
—PLANE	—DELIVERY TRUCK
—OR SHIP TO	—CONSUMER

your product needs and deserves the extra margin of safety in Gaylord Boxes that comes from correct functional design, better materials, and precision manufacturing.

GAYLORD CONTAINER CORPORATION

General Offices: SAINT LOUIS

New York • Chicago • San Francisco • Atlanta • New Orleans
Jersey City • Seattle • Indianapolis • Houston • Los Angeles • Oakland
Minneapolis • Detroit • Jacksonville • Columbus • Fort Worth
Tampa • Cincinnati • Dallas • Des Moines • Oklahoma City
Greenville • Portland • St. Louis • San Antonio • Memphis
Kansas City • Bogalusa • Milwaukee • Chattanooga • Weslaco
New Haven • Appleton • Hickory • Greensboro • Sumter

Corrugated and Solid
Fibre Boxes

Folding Cartons

Kraft Grocery Bags and
Sacks

Kraft Paper and Specialties



THE FROZEN-FOOD INDUSTRY IS FINDING PROFIT— in this wonderful new container!

This new frozen-food container is a compact unit with a paraffin-impregnated fibreboard body and strong metal ends.

Its simplicity and strength eliminate the use of inner bags and separate liners. It speeds up processing and packaging, gives greater protection to the product.

Tests show that it is preferred by both dealers and consumers. Food processors

find that it decidedly reduces processing costs and unit costs on frozen foods.

Research and Know-How

This new container—a product of American Can Company research and technical know-how—is another positive evidence that *those who do business with Canco profit*. For 46 years we have been helping our customers to

profit through our creative approach to container problems.

We have never stopped inventing new containers and improving old ones.

These achievements make an impressive record which benefits you and your business. We can help you solve your container problems—to increase *your* business and *your* profit.

AMERICAN CAN COMPANY

NEW YORK • CHICAGO • SAN FRANCISCO

SMART Decoration

... SEALING WITH "CEL-O-SEAL"

REG. U. S. PAT. OFF.

It's the *practical* way to colorfully enhance your package and seal in quality. Too, "Cel-O-Seal" guards against evaporation, leakage and tampering. And for brandy bottles, the Wind-O-Band* seal is smart for still another reason: it clearly displays the tax stamp, yet holds it securely in place.

"Cel-O-Seal" cellulose bands and "Wind-O-Band" cellulose seals are manufactured by E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware. They are also sold by Armstrong Cork Co., Lancaster, Pennsylvania, and I. F. Schnier Co., San Francisco, California.

*TRADE MARK

DU PONT "CEL-O-SEAL" BANDS

DU PONT "WIND-O-BAND" SEALS



BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY





may the season's joys be yours always

HAZEL-ATLAS GLASS COMPANY



Do these "gremlins" give you wrapper trouble?

Moisture or grease is at the bottom of most wrapper trouble. Even when there's just a little, it has a way of working into the wrapper causing weak spots, leaks, and messy stains. A way to avoid this trouble is to use wrappers of Patapar* Vegetable Parchment. Grease and moisture don't have a chance with Patapar.

Patapar has wet-strength —resists grease, too

Patapar is famous for its wet-strength. It can take any amount of drenching, soaking—even boiling—and remain strong.

Where there's grease, fats or oils, Patapar resists penetration. It makes a clean, neat package—and really gives protection.

Irresistible appeal

Patapar's rich white texture adds distinction and sales appeal to whatever is wrapped in it. When color is wanted, Patapar can be printed beautifully with brand names and attractive designs. We print Patapar economically in our own plants in one or more colors by letterpress or offset lithography.



When you order printed Patapar, we'll include the Keymark at no extra cost. The Patapar Keymark is the nationally advertised symbol of wrapper protection. When women see it on a wrapper, it reminds them the product inside is well protected.

* Reg. U. S. Pat. Off.

Paterson Parchment Paper Company • Bristol, Pennsylvania

Headquarters for Vegetable Parchment Since 1885

WEST COAST PLANT: 340 BRYANT STREET, SAN FRANCISCO 7, CALIFORNIA

BRANCH OFFICES: 120 BROADWAY, NEW YORK 5, N. Y. • 111 WEST WASHINGTON ST., CHICAGO 2, ILL.

How the HIGHLAND PACKAGE *Reached New Heights* in Sales Appeal

The old A.G.* HIGHLAND brand label (see left) was a good label as far as it went. However, it lacked strong appetite appeal and good trade-mark identification. It didn't contain sufficient voluntary descriptive material, so much desired by consumers today. It didn't do a thorough merchandising job for the product. So package designers at U.S.P.&L. went to work to revamp the HIGHLAND package for the tough competitive selling conditions ahead. The resulting new label is shown below.

*Associated Grocers Company of St. Louis, Mo., distributors.



TRY THIS FOR EXTRA TEMPTING FLAVOR!

BEEF STEW WITH TOMATOES

2 lbs. stewing beef, diced
3 quarts boiling water
2 teaspoons salt
4 medium potatoes, diced
4 medium onions, with salt, for about 2 hours, or until perfectly tender, simmering gently in a lightly covered kettle. About 20 minutes before meat is done, add tomatoes and add juice to stew. Mix flour to a smooth paste with cold water and add to stew, stirring constantly until thickened. Add drained tomatoes and continue heating about 5 minutes. Serve piping hot, with a garnish of parsley.

1

The DISPLAY PANEL was completely revamped. A modern trade-mark design, incorporating a Scotch lassie and the firm initials "A.G.", was originated to strengthen brand identity and trade-mark recognition. A direct color TRU-TONE vignette steps up appetite appeal as well as increasing product identification. Strong yellow letters on a dark blue background enhances the shelf visibility of the brand name.

2

The INFORMATION PANEL was used for organizing all mandatory information and a great deal more voluntary information in one unit of the label where it can be conveniently read and easily understood by the consumer. By reading the panel a housewife can secure all essential information concerning the product to help her make a more intelligent buying decision.

3

The CONSUMER PANEL contains an appetite tempting full color food pictorial of a serving of the product, together with a recipe for preparation. What an improvement in the merchandising value and sales appeal of the new label over the old where the Display Panel design was merely repeated on the back of the package. This famous "U.S." EYE-PETIZED recipe design not only thoroughly merchandises the product at point-of-sale but, also, at point-of-use, in the kitchen.

A PACKAGING CASE HISTORY
FROM THE FILES OF U.S.P.&L.



The new design was adapted to the entire line of HIGHLAND brand canned fruits and vegetables. Above is shown a representative group of these attention compelling, eye appealing packages — front and back views.

Officials of the Associated Grocers Company and A.G. store operators acclaim the new series of labels as the finest they have ever had. Also, these new labels are paying off in increased sales of HIGHLAND products.

Writes Edward J. Walsh, A.G. Assistant General Manager, "The new "U-S" EYE-PETIZED labels

pack new sales and merchandising power in HIGHLAND packages. Our store operators are extremely enthusiastic and consumer reaction is reflected in increased sales of the brand since the new labels have been in use."

What has been accomplished for Associated Grocers' HIGHLAND brand can be done for your package, too. Regardless of the product, if it's sold in retail stores, the package is being called upon today to sell as never before. Consult a U.S.P.&L. packaging specialist about preparing your package to reach new heights in sales appeal.

THE UNITED STATES PRINTING & LITHOGRAPH COMPANY
 EXECUTIVE OFFICES: 753 BEECH STREET, CINCINNATI 12, OHIO ★ SALES OFFICES IN PRINCIPAL CITIES
 5 GREAT "U-S" PLANTS PRODUCING HIGHEST QUALITY ADVERTISING AND PACKAGING MATERIALS



to the Buyer of Cartons



At the production level, the package is an important part of the picture . . . able to add to or subtract from efficient handling and filling. At the sales level, the package is often the whole picture . . . in that it's all a customer sees until after a purchase is made. The carton buyer who prefers Ridgelo Clay Coated Boxboard assures the satisfaction of both his production and sales staffs . . . through Ridgelo's smoothness, strength and uniformity in the first case, through its cleaner, brighter and more appealing appearance in the second case. What you get is what you ask for in Ridgelo . . . for it's *custom-made* to perfectly fit your particular design, printing and filling requirements.



MADE AT RIDGEFIELD, N. J.
BY LOWE PAPER COMPANY



*custom-made for the individual process, inks, designs, colors and finish.

REPRESENTATIVES:

H. B. Royce, Detroit • Norman A. Buist, Los Angeles • A. E. Kellogg, St. Louis • Philip Rudolph & Sons, Inc., Philadelphia



Christmas Greetings

from Thomas Benton, Al Hailparn, and E-F...

Albert Hailparn, E-F executive vice-president ... in the spring of 1944 was Captain Hailparn, USAAF, home on leave, and having a busman's holiday in the office. As the only art connoisseur in the Company, he was delegated to find some non-commercial art suitable for the E-F annual Gift print ... But 1944, you remember, was a year of D-Days, doubts, dread, casualty lists, shortages, and events more memorable than Christmas and the Gift print wasn't printed.

And now for the first time in four years, paper and press time permit the production of the Thomas Benton selected in 1944 by Captain (now Mr., and Al to his friends) Hailparn ... who herewith accounts for his selection ...



“The usual ‘Tobacco Road’ subjects painted by Thomas Benton have always been macabre and depressing to me—something to look at and forget fast ...

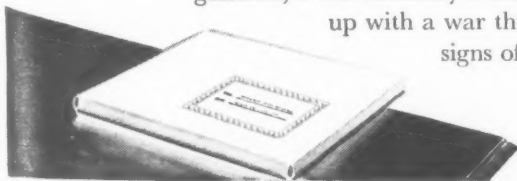
“That afternoon in 1944, shopping art galleries, I was mentally a GI Joe, very fed up with a war that showed no signs of ending. The

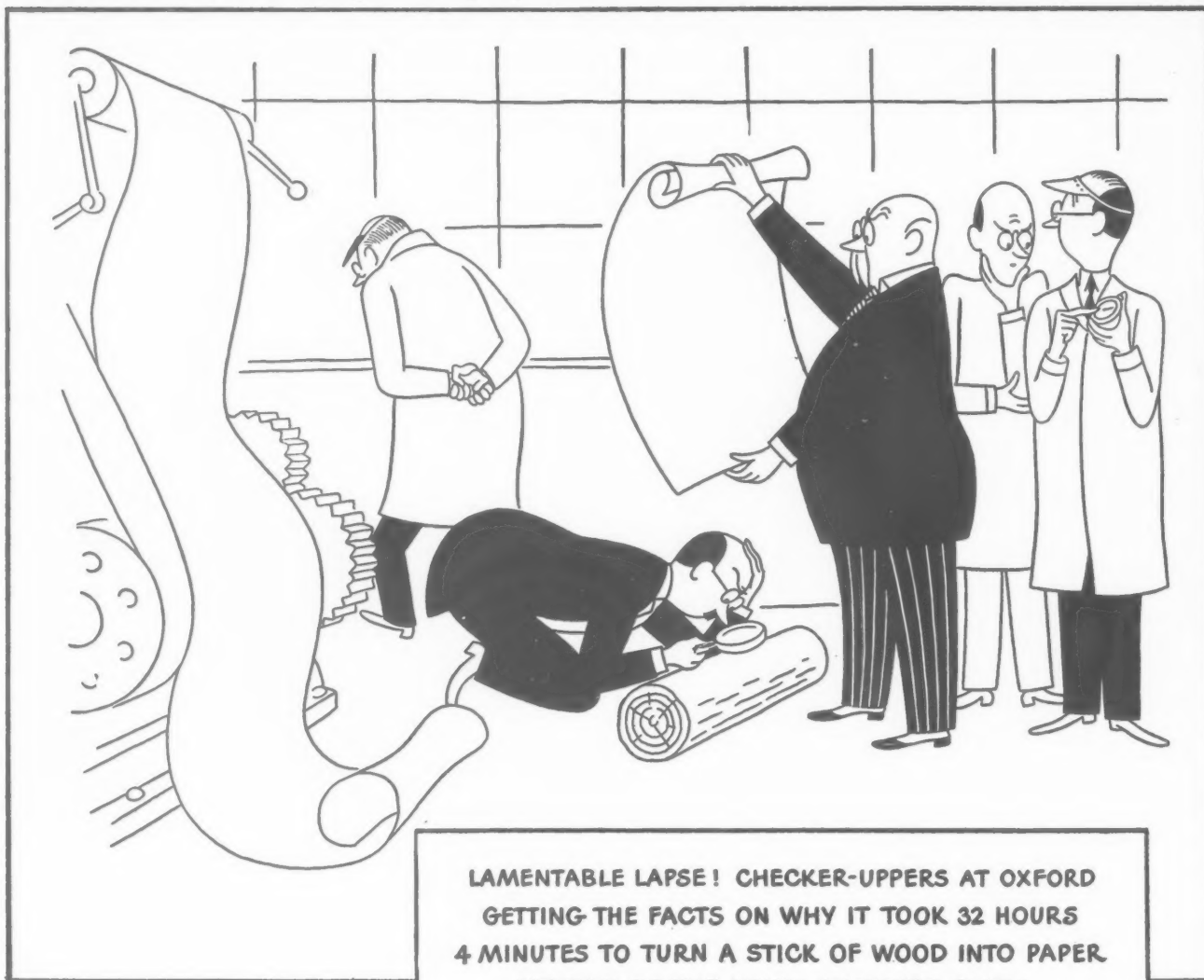
uncertain sky, the lush meadow grass, the peach trees pink and white, the exuberance of the horse and the boys, the luminiscent quality of the paint ... all made ‘Spring Tryout’ seem like a glimpse of a simple, naive, gay, almost forgotten world, pretty wonderful and far away.

“It also occurred to me that the painting was the only happy Benton I had ever seen. And after three years I still like it more than any other Benton I have ever seen.”

So it is our pleasure this holiday season to be able to offer with our best wishes ... a faithful reproduction in full color of “Spring Tryout”, lithographed with loving care by craftsmen who do care. The print is 30½ by 24¼ inches, and a collector's item. If you are not on our lists and would like a copy, please let us know.

EINSON-FREEMAN Co., Inc. ... *not-always non-commercial Lithographers*, Starr & Borden Aves., Long Island City, N. Y. ... *with offices in Chicago, Cleveland, Cincinnati, Dallas, Minneapolis, St. Louis, Atlanta, San Francisco, Los Angeles.*





**LAMENTABLE LAPSE! CHECKER-UPPERS AT OXFORD
GETTING THE FACTS ON WHY IT TOOK 32 HOURS
4 MINUTES TO TURN A STICK OF WOOD INTO PAPER
INSTEAD OF THE USUAL 32 HOURS FLAT!**

ACTUALLY, making quality printing paper at Oxford's plant is a mighty smooth operation.

Each day, we produce better than 1,000 miles of many varieties—a rate we have maintained for a good many years.

Oxford can maintain this high rate of production because our facilities are *complete*. We control every step in the production of paper from the wood to the sheet of finished paper ready for the press.

Helping to maintain Oxford's record of quality are its craftsmen, hundreds of whom have

had 20 or more years' experience in the art of making paper here at Oxford.

Furthermore, each day's run is given over 5,000 separate tests for quality—tests for such things as fold, surface bond, color and good printing properties. Besides making sure that every sheet of Oxford

paper is right, our Research Department is constantly working to find ways of making paper better.

So when you need paper that *must* be right for the job, call your merchant who handles Oxford papers. You will find Oxford merchants in key cities coast to coast.



Included in Oxford's line of quality printing and label papers are: Polar Superfine Enamel, Maineflex Enamel Offset, Maineflex C1S Litho, Mainefold Enamel, White Seal Enamel, Engravatone Coated, Carfax English Finish, Super and Antique, Aquaset Offset and Duplex Label.

OXFORD PAPER COMPANY

230 PARK AVENUE, NEW YORK 17, N.Y.

MILLS at Rumford, Maine
and West Carrollton, Ohio

WESTERN SALES OFFICE:
35 East Wacker Drive, Chicago 1, Ill.

DISTRIBUTORS
in 48 Key Cities

**ANY TYPE
ANY SHAPE**

Packed BRIGHT! TIGHT! and FAST!

DEAD-FOLDING! That's a *big* feature of Alcoa Aluminum Foil. Consider the savings in time and packaging costs this unique, protective quality can make for you. A sparkling wrap of Alcoa Foil will fold to fit any shape, odd or regular, and *stay folded*—adaptable to high-speed packaging and heat-sealing methods.

PROTECTION! Alcoa Foil has an MVT (moisture-vapor-transmission) rate of practically *zero*. What's more, it is gasproof, greaseproof, lightproof and non-toxic—not affected by age or temperature extremes.

VERSATILE! If you are looking for modern packages that *protect* . . . packages that *sell* . . . be sure to investigate Alcoa Foil. Leading package manufacturers, experienced in designing aluminum foil packages, will be glad to work with you. For their names, write ALUMINUM COMPANY OF AMERICA, 2129 Gulf Building, Pittsburgh 19, Penna.

ALCOA

DEAD-FOLDING! That's a *big* feature of Alcoa Aluminum Foil. Consider the savings in time and packaging costs this unique, protective quality can make for you. A sparkling wrap of Alcoa Foil will fold to fit any shape, odd or regular, and *stay folded*—adaptable to high-speed packaging and heat-sealing methods.

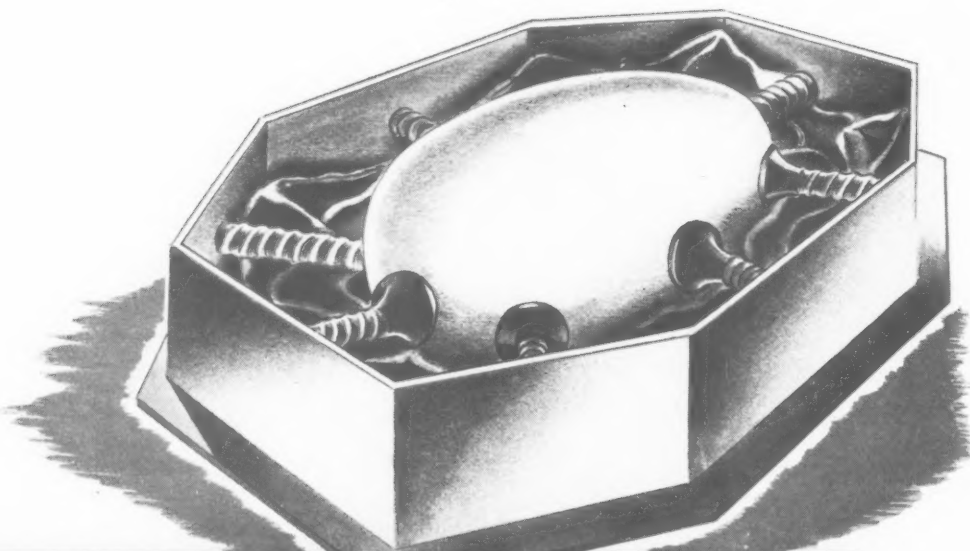
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MORE PEOPLE WANT MORE ALUMINUM FOR MORE USES THAN EVER



ALCOA ALUMINUM FOIL



How to box *Aristocratic Eggs*

Suppose you were in the egg business and eggs reached a retail high of \$300 each. . . Chances are you'd want to pack them in luxurious, shock-proof boxes—one egg per box. But, when you started to set up your packaging line you'd run into a lot of problems not covered even by the Packaging Encyclopedia.

For example, where would you get machines to make eight-sided boxes? How install the egg springs? Or apply the plush linings? Or machine-fill each box with an unbroken egg?

By enlisting Codie-Kay's uniquely specialized professional aid, you could make sure of getting workable answers the quickest way.

How come? Because, as seasoned packaging engineers, we specialize in devising new *machines* and new *methods* to iron out costly kinks in our clients' packaging operations. *We design and build special equipment around hard-to-handle products* so that

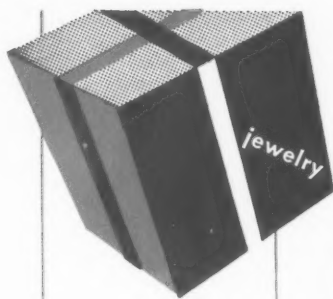
they can be machine-packed at lowest unit processing cost. And, wherever it is necessary, we rearrange the physical layout of the packaging department to insure continuous and uninterrupted work-flow.

Therefore, if your packaging department isn't functioning fast enough or economically enough, ask us to diagnose its ailments and to submit recommendations necessary for the cure. Direct your confidential inquiry to Codie-Kay Co., 1139 San Julian Street, Los Angeles 15, California.

Codie-Kay
COMPANY, INC.

SPECIALISTS IN THE DESIGN AND MANUFACTURE
OF COMPLETE PRODUCTION PACKAGING SYSTEMS.

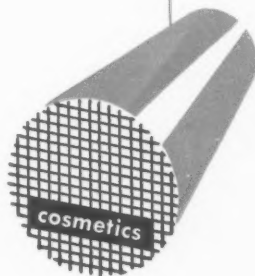
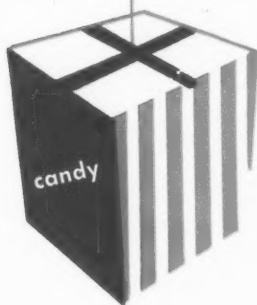
IF STANDARD EQUIPMENT WON'T DO THE JOB, CODIE-KAY WILL.



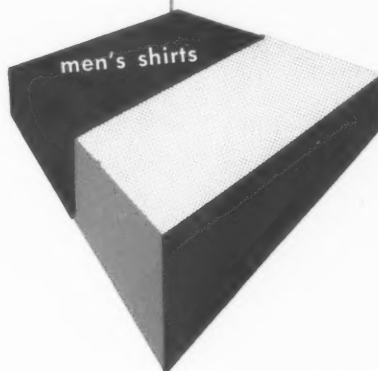
there's a **KUPFER** packaging paper

FOR EVERY PRODUCT!

FOR EVERY HOLIDAY!



Printed or embossed coated papers,
metallic foil papers, individualized
trade-marked papers — for
day-to-day packaging use, gift
packaging and holiday
promotions. Over 5,000 patterns
from which to choose. Write or
phone us about your specific needs.



COLOR SELLS



KUPFER BROS. CO.

4 ASTOR PLACE, NEW YORK 3, N. Y.

Manufacturers of Surface Coated Papers Since 1845

KUPFER BROS. PAPER CO.
145 West Hubbard Street
Chicago 10
Illinois

Southwest Representatives
MODERN PACKAGINGS
1214 S. Akard St.
Dallas 1, Texas

EDWARD M. MARKS CO.
8334 West Third Street
Los Angeles 36
California

Branches in
BOSTON •
PHILADELPHIA
SEATTLE



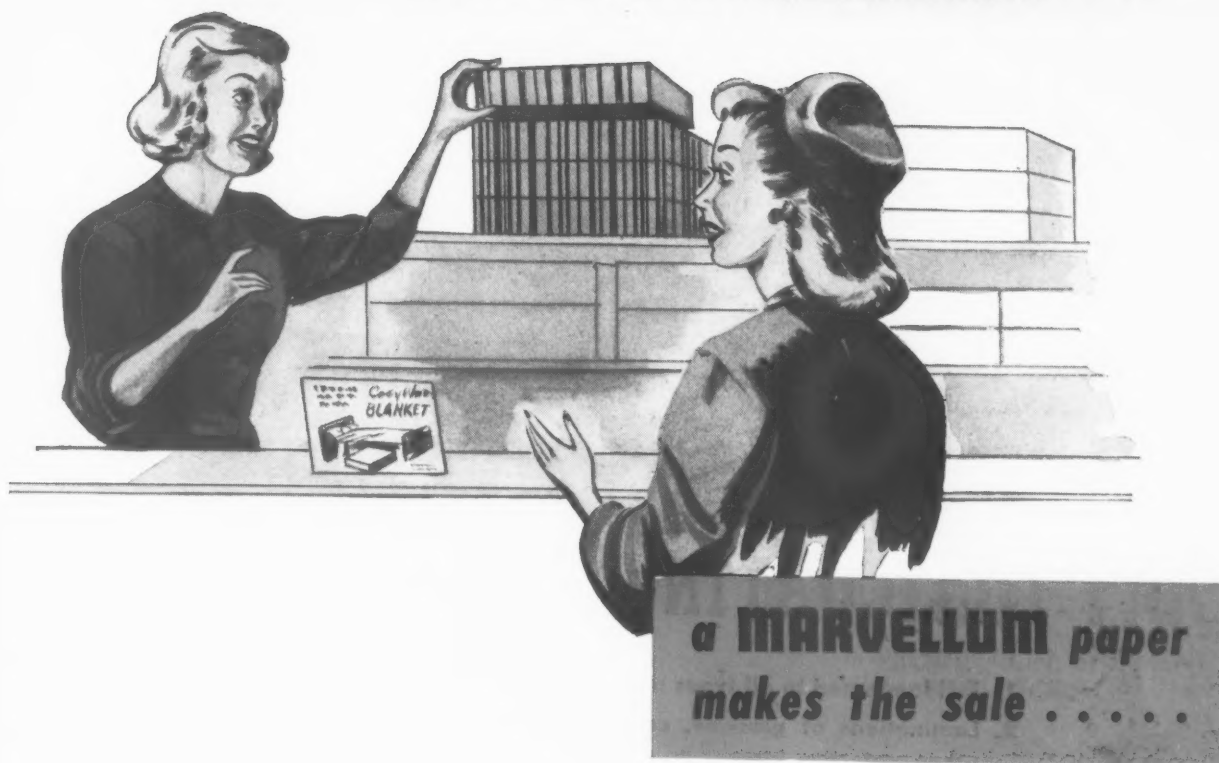
ESTABLISHED 1876



Manufacturers of
PRESENTATION BOXES
JEWELRY FINDINGS AND SOLDERS
TROPHIES • MEDALS • BALL CHARMS

F. H. NOBLE & COMPANY 559 West 59th Street, Chicago 21, Illinois

When Shoppers Become Buyers



Among countless competitive products, a *Marvellum-wrapped* paper caught her eye . . . created the impulse to buy.

There's a good reason for this. *Marvellum Papers Distinctive* designers have spent years creating outstanding designs, new and striking color combinations, out-of-the-ordinary paper quality. These advancements mean more point-of-sale power for your package . . . positive sales success.

Send along your requirements and we will design an exclusive paper especially for your packaging requirements.

THE MARVELLUM COMPANY

• *Papers Distinctive* •

HOLYOKE
MASSACHUSETTS

THE GUMMED PRODUCTS COMPANY

ANNOUNCES A NEW

Reliable Source

**FOR CUSTOM LAMINATING
AND COATING**

1. Foil laminated to all types of paper, board and cloth.
2. Laminations of glassine, cellophane, acetate, Pliofilm and other protective films.
3. Special heat seal, greaseproof and waterproof coatings.

On problems involving these specialties, consult our new Laminating and Coating Division. This recently established division will produce high-quality, custom-made laminated and coated products exclusively for the decorative, protective and graphic arts fields.

Today's latest equipment, years of specialized experience, plus an active research

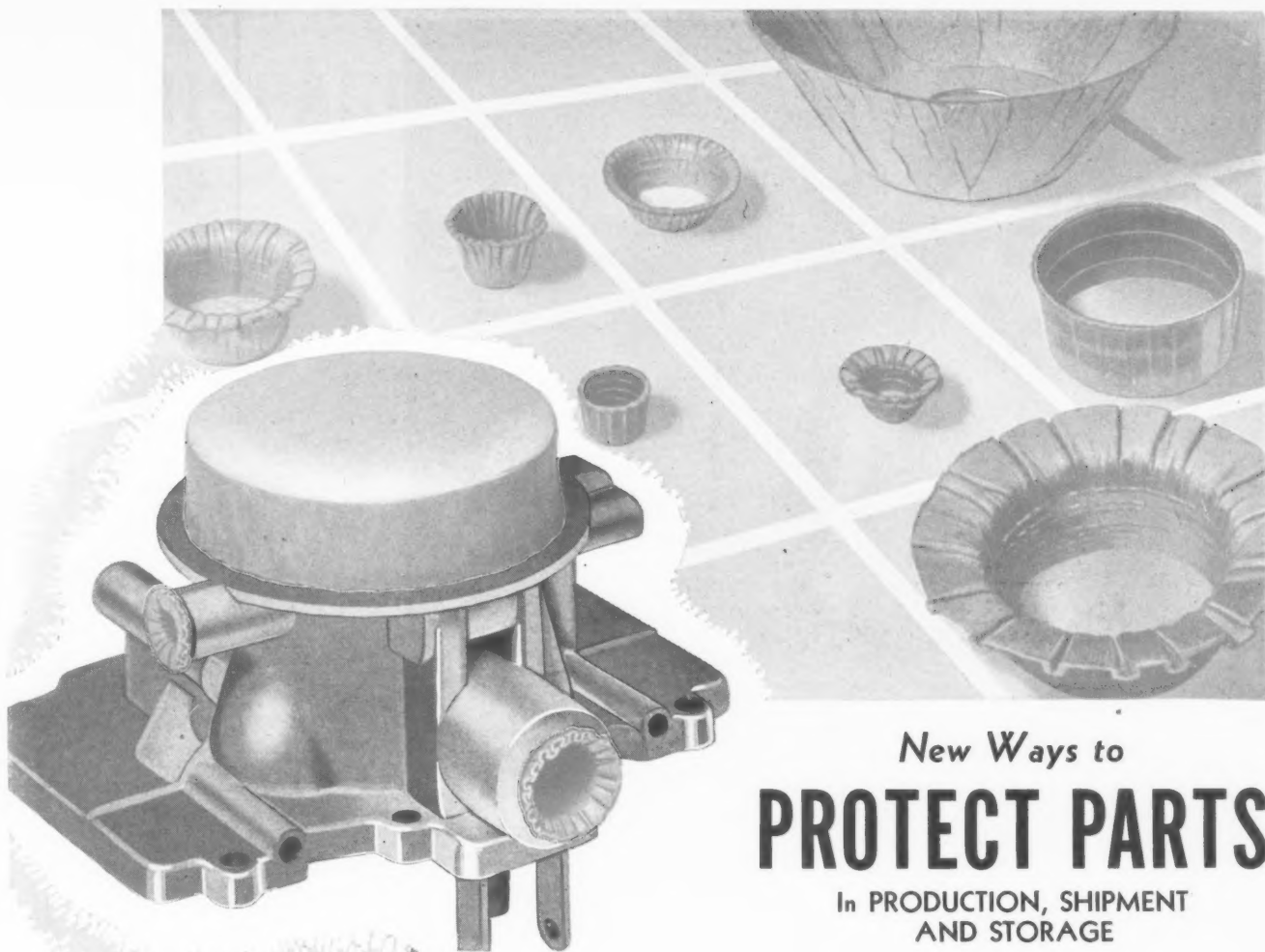
and testing program assure highest manufacturing standards—just as in other divisions of the company. And these standards are exceptionally *high*—a tradition initiated by The Gummed Products Company founders more than thirty-four years ago.

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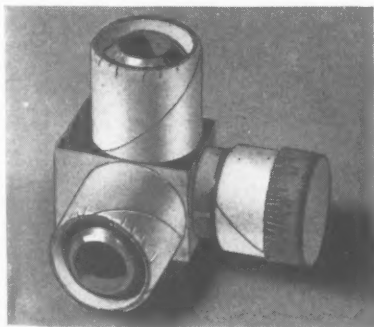


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Photos show Traver transparent sales packages in actual use.



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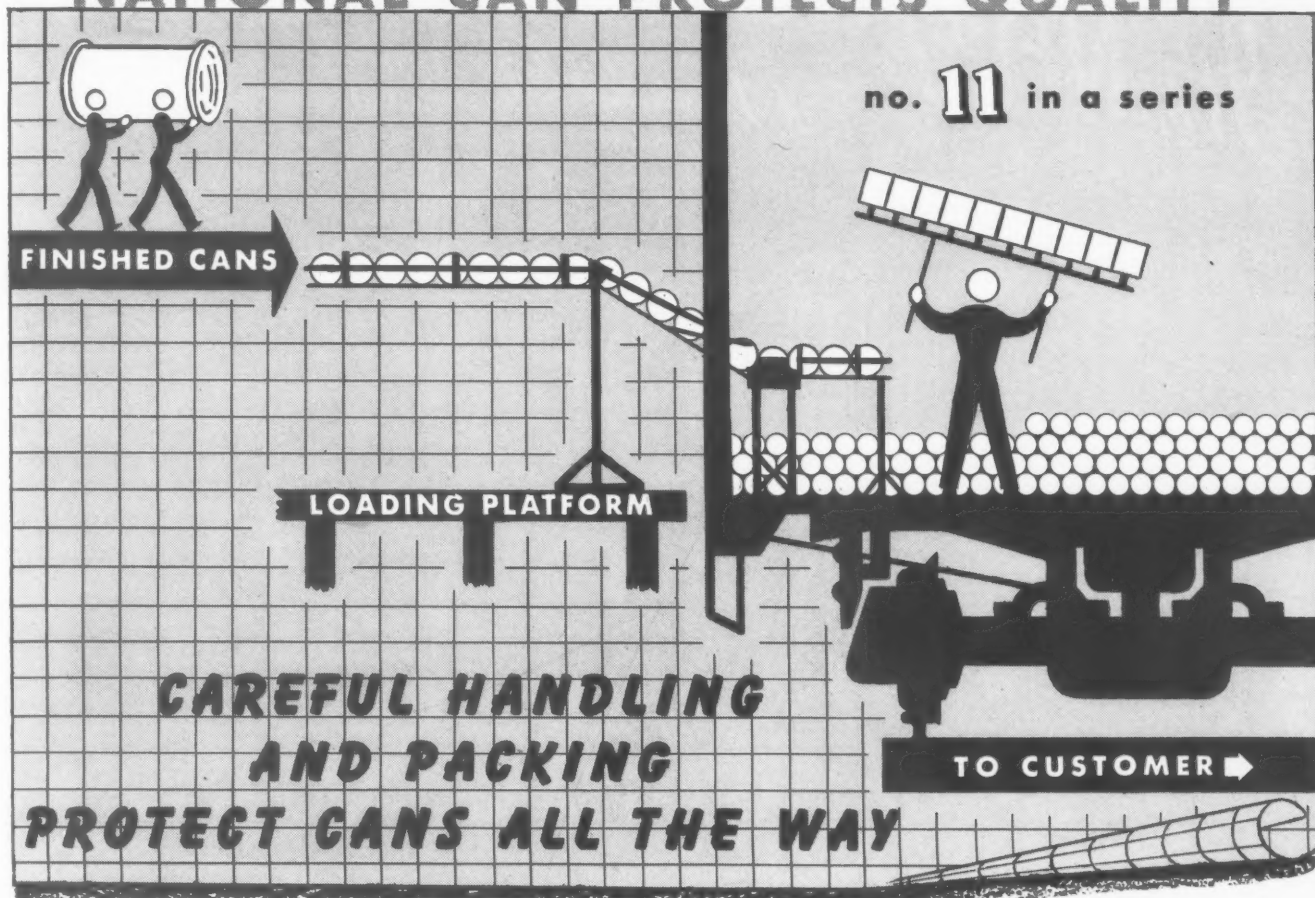
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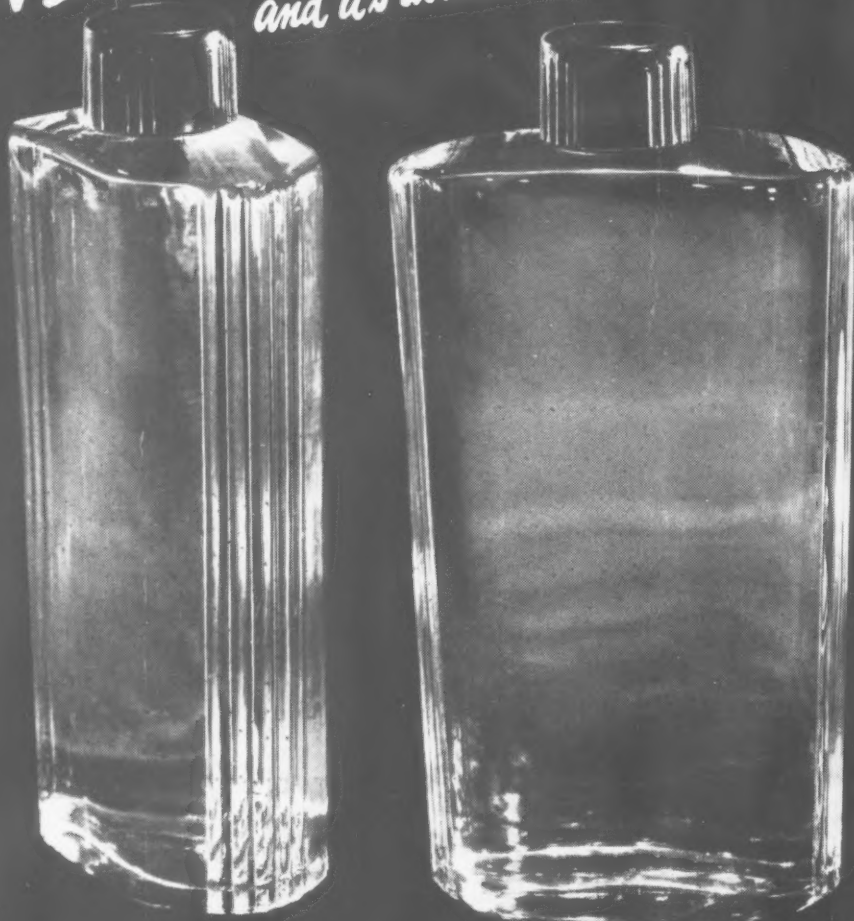
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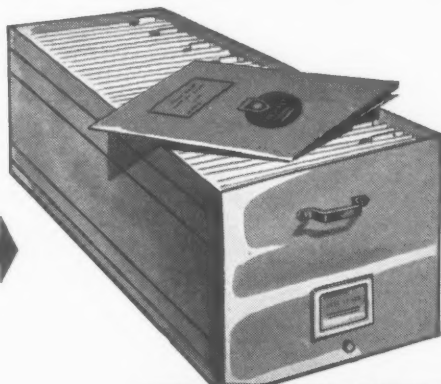
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When you think of bottles think of

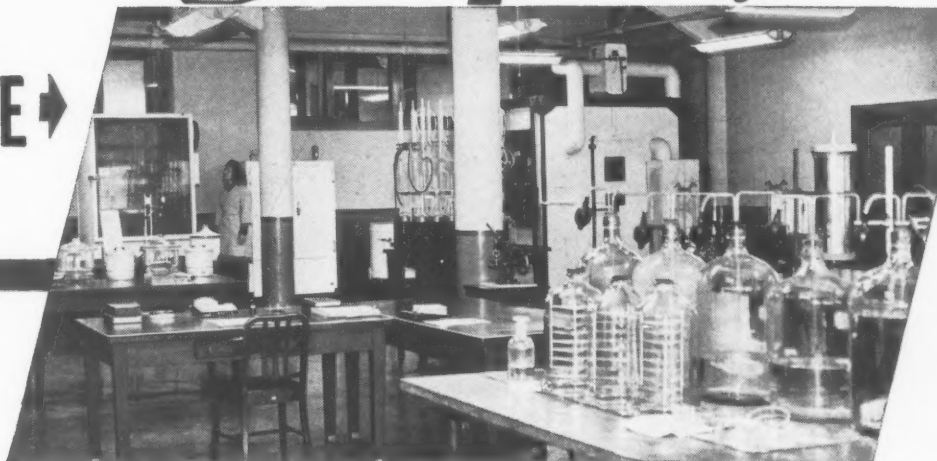
Swindell

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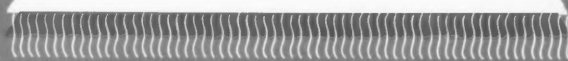


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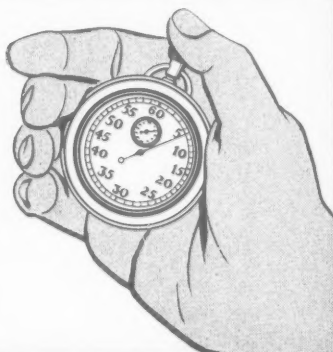
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Kreml shampoo and hair tonic use distinctive private-mold bottles, but the designer has held to shapes that operate advantageously on automatic packing lines—avoiding main pitfall of private design.



Ribbed oval bottle recently adopted for Wildroot is easy to handle, compact in shape, light weight and has wide mouth for added convenience.

PRIVATE GLASS OR STOCK?

**A survey discloses present practices and future plans
of four of the country's leading glass-using industries**

As costs for packaging materials and operations continue to rise, glass containers come in for their share of scrutiny in the effort to resist price increases. Particularly, the question of stock versus private molds is being carefully examined. It is well known, of course, that the stock mold presents advantages of economy, ready availability and operational convenience. But as competition becomes keener, individuality of package appearance—which is a contribution made by the private mold—also comes to be highly important.

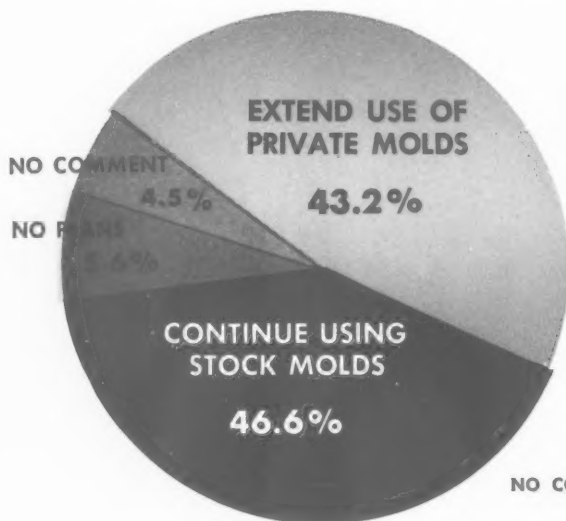
How do these two conflicting principles measure up in the judgment of the packaging field? To what ex-

tent do packers in glass use stock molds, in comparison with private molds? How does that vary in different lines of business? Among other ravages made by the war, what did the shortage situation do to packaging programs with respect to glass containers? What is the current attitude toward stock molds from the production point of view in comparison with the sales and merchandising point of view? Dependent on conditions, what future plans are being contemplated regarding the use of private molds?

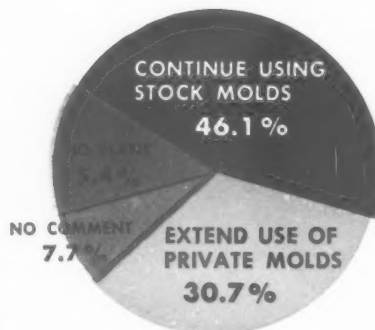
Obviously, no one user or supplier can possibly answer all of these questions with any degree of accuracy. But MODERN PACKAGING decided to obtain a

FUTURE PLANS: PRIVATE VS. STOCK MOLDS

TOTAL OF ALL RESPONSES



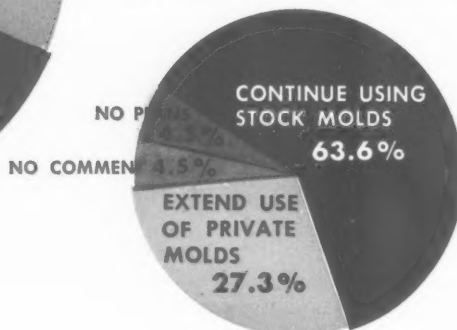
FOOD PRODUCERS



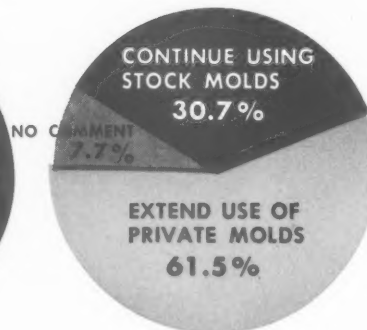
DRUGS & PHARMACEUTICALS



COSMETICS & TOILETRIES



BEVERAGES



cross section of industry opinion and make a report for what it might be worth for the guidance of its readers.

A questionnaire was sent to a carefully selected list of manufacturers who use glass containers for packaging. The "sample"—based on previous experience in similar activities—was large enough to comprise a good composite opinion, including representation from food producers, drug and pharmaceutical manufacturers, cosmetic producers and three segments of the beverage field. The responses were gratifying, comprising 26% of those to whom the letters were sent. The option was given to sign or not, as the recipient chose. Only 20 of those responding preferred not to sign and in several cases these persons indicated the line of business in which they were engaged without disclosing the company name. The responses were carefully tabulated and from them it is possible to draw certain conclusions—as straws to show which way the wind blows.

Present practices

The first question asked was: "What percentage approximately of the glass containers you are using at present are stock molds? Private molds?" Thirty per cent of the responses indicated a 100% commitment to the stock mold as compared with 11% which were entirely committed to private molds. When the answers were tabulated in brackets, it was found that exactly half of them are using stock molds to the extent of 80 to 100%; a little over one-fourth reported that stock

molds are now in use for 20% or less of their production.

In the food field, as might be expected in a line where margins are small and turnover is rapid, the stock mold is quite thoroughly entrenched—77% of the food producers who replied use between 80 and 100% of stock molds. However, the private mold has a few champions among food manufacturers; for an equal percentage uses the private mold up to 20% of production.

With drug and pharmaceutical manufacturers, the stock mold predominates, 55% of them being in the 80 to 100% bracket for use of stock molds, although there is a valid functional reason for their use of the private mold, which will be brought out later in this article.

Makers of cosmetics and toiletries, as would be expected, are ardent advocates of the private mold, 27% of them being committed to its use to the extent of 100% and 41% of them being in the 80 to 100% bracket of users.

In the beverage field, between 40 and 50% of those who reported from three different subdivisions of that industry indicate that they are now using stock molds for at least four-fifths of their entire output. In the alcoholic-liquor industry, where war restrictions forced full use of stock molds, 40% of the responses indicated a heavy present use of the private mold.

Some of the questionnaires, as already quoted, were not signed and contained no indication of the line of business. Presumably, however, these came proportionally from the various industries which were ques-

tioned. Forty-five per cent of these are in the top bracket for the use of stock molds.

The second question was "Did war shortages make any changes in your glass-container program?" Seventeen per cent of all the responses reported that the war caused a complete change-over from private to stock molds. Forty-one per cent reported some modification or interruption of their private-mold program. Twenty-four per cent reported no change because they had been using stock molds. Eighteen per cent of the total number of responses were from users of private molds whose program was unaffected by war conditions.

The alcoholic-liquor people suffered most. Eighty per cent of the responses indicated a complete change from private to stock molds, though that must not be interpreted to mean they had been 100% users of private molds; it merely means a complete dropping of the private mold, as required by L-103. Food producers also suffered, as 38% of them made the complete change-over. Thirty-five per cent of the drug and pharmaceutical manufacturers as former stock-mold users made no change in their program, although 40% of those responding were obliged to make some modification. Among cosmetic and toiletry manufacturers, a trifle over 40% reported that they were able to continue their private-mold program, while the same percentage reported more or less interruption. Beer and carbonated beverages were apparently unaffected by the war, at least so far as the responses to this study indicated, while the program of the wine people had to undergo considerable modification.

Which way now?

Right at the present time, it would appear that the glass user is able to make a choice. Because the supply situation is improving, he can move in the direction either of more complete usage of stock molds, or on the other hand, he can extend his use of private molds. The situation permits and calls for a re-



The liquor industry, normally a heavy user of private-mold bottles, is returning to them rapidly. This example was recently re-introduced. Bottle has a small bead at the base which serves as a guide to the labeling machine and permits accurate positioning of labels at high speed.



Distinction if not exclusivity is offered by new lines of stock bottles being brought out by several glass makers. This new line for perfumes has unusual round shoulder, but offers flat panel for ease in labeling. Above is one of the bottles adopted by Park & Tilford for Wild Harvest perfume; note the distinction which has been achieved by special cap and label.



appraisal of the advantages and disadvantages of each; and this evaluation should be made from two main points of view—namely, from that of production considerations and from that of sales and merchandising.

The third question, in line with this thought, brought some interesting replies. It read "What comments would you make regarding stock molds (a) from the production-line point of view and (b) from the sales and merchandising point of view?"

Of practical but unusual shape are these new stock bottles for the cosmetic and perfume trade.



The interest manifested in this question can be gauged by the fact that almost all the replies made some comment and some elaborated on points of importance, as will be shown later. From the production point of view, 53% of the responses reported that stock molds are more satisfactory; 13% reported "no difference"; 11% preferred private molds, pointing out in most of the latter cases that their equipment was built for such purposes.

The food people lead in their approval of the stock molds—at least, 83% of those responding so expressed themselves, as did 65% of the drug and pharmaceutical manufacturers; 36% of the cosmetic folks also pronounced stock molds more satisfactory, production-wise. In the liquor field, several of the reports were made by individuals who frankly labeled themselves as production men, clearly indicating a preference for the stock mold. Among the unsigned questionnaires, 45% prefer stock molds in production as compared with 20% who prefer private molds.

The merchandising angle is quite different. Fifty-five per cent of the total number of responses declared that stock molds were at a competitive disadvantage. Only 22% pronounced stock molds satisfactory for merchandising purposes. The food-field comments were about equally divided on this question with a slight plurality admitting that stock molds have competitive disadvantages. The balance was in the other direction with the drug and pharmaceutical manufacturers, 45% of whom consider stock molds satisfactory as compared with 35% who admit the competitive disadvantages. The cosmetic people vote heavily against the stock mold for purposes of merchandising, according to reports from 55% of those who responded, although 14% of them declare that stock molds do a satisfactory merchandising job. The three divisions of the beverage

HOW WAR SHORTAGES AFFECTED GLASS CONTAINER PROGRAMS

	TOTAL OF ALL RESPONSES	FOOD PRODUCERS	DRUGS & PHARMA- CEUTICALS	COSMETICS & TOILETRIES	BEVERAGES
COMPLETE CHANGE FROM PRIVATE MOLDS TO STOCK MOLDS	17.0%	38.4%	5.0%	4.5%	30.7%
SOME MODIFICATION OF PROGRAM	40.9%	30.8%	40.0%	40.9%	38.5%
NO CHANGE — CONTINUED WITH PRIVATE MOLD PROGRAM	18.1%	0	10.0%	40.9%	15.4%
NO CHANGE — CONTINUED WITH STOCK MOLD PROGRAM	23.8%	30.7%	35.0%	13.6%	15.4%

EXTENT TO WHICH STOCK MOLDS ARE NOW BEING USED

	TOTAL OF ALL RESPONSES	FOOD PRODUCERS	DRUGS & PHARMA- CEUTICALS	COSMETICS & TOILETRIES	BEVERAGES
80-100% STOCK MOLDS	50.0%	76.9%	55.0%	36.3%	46.1%
60- 80% STOCK MOLDS	4.5%	7.6%	5.0%	4.5%	7.6%
40- 60% STOCK MOLDS	9.0%	15.2%	10.0%	4.5%	7.6%
20- 40% STOCK MOLDS	9.0%	0	15.0%	13.6%	0
UNDER 20% STOCK MOLDS	28.4%	0	15.0%	40.9%	38.4%

field voted nearly 80% for the private-mold's sales ability and those who sent in unsigned responses to the questionnaire registered 70% for the private-design bottle.

Future plans

What are the glass users going to do toward turning their opinions into action? The fourth question read: "Conditions permitting, what are your future plans regarding private molds?" The letter that accompanied the questionnaire made it clear that all replies would be treated with absolute confidence, that is, without any disclosure of names to indicate plans of specific companies. Perhaps that is a reason why the responses were so frank in telling of their intentions. At any rate, here are the results: Forty-three per cent of the total responses indicated the intention to extend their use of private molds, but 46% expect to continue stock molds; 5.6% definitely have no plans and 4.5% made no comment.

The food men, to the extent of 30%, plan a wider use of private molds. Drugs and pharmaceuticals make it 40%. Surprisingly enough, only 27% of the cosmetic firms expressed an intention to extend private-mold use—probably because the private mold is already as firmly entrenched in that field as it can expect to be. But 61.5% of the three divisions of the beverage field will use more private molds—the hard-liquor people going 100% in that direction. The unsigned responses showed that 60% will extend private-mold use as compared with 25% that will continue stock molds, 10% having no plans and 5% making no comment.

As is always the case when using the questionnaire method on a live subject, many of the blanks which were



Possibilities for different treatment of the same stock-mold bottle are evidenced by these old (left) and new packages for Thermopine bubble bath. New one takes on entirely different aspect with tall wood cap and all-around label.



Stock jar for jellies and preserves can achieve individuality by label treatment, as shown by these old (left) and new labels for Brook-Maid.

returned contained some exceedingly valuable information, comments and conclusions voluntarily proffered by those who responded. For example, a prominent food manufacturer says, "Our plans are to retain the economy-line jars for 100% of our requirements. Prior to the war, we were using private molds 100%. When we were forced to change over to the economy-line bottles, we learned from experience that this was entirely satisfactory and a very practical move." Another, however, committed entirely to private molds, explains that he is opposed to stock molds because the trend of his merchandising is away from paper labels to permanently blown-in-the-bottle labels. A soft-drink manufacturer points out that long usage of a private mold—20 years in his case—plus volume distribution, serve to cancel out the advantages of availability and economy usually credited to the stock mold.

From the pharmaceutical field came some interesting comments. Several pointed out that if individuality of design is desired it can be obtained by means of the printed labels, cartons, etc. Merchandising practices, too, have their bearing. For instance, a manufacturing chemist explains that because he deals with the wholesale trade directly and produces few items for "over-the-counter" sale, standard glass containers are best suited for his requirements. Others in the same line have reached the conclusion that the private mold doesn't carry the merchandising advantages that it did formerly, although where a product requires a measuring gauge or dispensing device for consumer convenience, that element fully justifies private-mold use.

Even in the cosmetic field, where the private mold is more firmly entrenched than in any other line of business, there are variations from the general opinion. Stock bottles, says one cosmetic manufacturer, can utilize decorative caps, labels, etc., to give an unusual appearance. Another has a line with an established following in beauty salons, where there is no occasion for the use of private molds of unusual character; consequently, stock molds are perfectly satisfactory. Still

on the merchandising question, one producer whose production is about equally divided as to stock and private molds, finds that keen competition in his line can make use of the private mold to avoid cut prices.

There were several who have come to the reluctant determination to go to private molds "if forced to it by competition," while at least two call attention to the fact that stock-mold tolerances are not close enough for their production requirements. One puts it thus: "The main reason for our use of private molds is to obtain bottles of correct capacity."

Questions of cost and quality

The glass companies are doubtless aware of some of the complaints which their customers voice. For instance, one company, stating that stock molds are usually kept in better condition by the glass manufacturer, complains that it has been necessary for them to call attention to the poor quality of private bottles, due to the mold running down. The same company suggests the possibility that when private-mold buyers go out of business, their molds might have good resale value among companies that want something distinctive without going to the expense of their own individual private molds. They suggest also that an arrangement could be made under which a user could design bottles without mold change on condition that the same design might be sold to non-competing users. Another grimly promises: "We will have our own molds as soon as the glass companies become more realistic about costs."

Obviously, the selection of a glass container is a matter which is given exceedingly careful thought. Says one, "We survey the field for a suitable container for a new package. If none can be found, we then have a private mold built."

A food manufacturer, admitting that his future plans regarding the use of private molds are indefinite, states that he will probably run consumer tests of private versus stock molds before making any final decision. The exporter faces other conditions which affect his choice. As one puts it, "We intend to continue the use of private molds for our export items because of the necessity for uniformity of package. Another 100% user of private molds says with pardonable pride, "We are an international company and our preparations are the same all over the world."

Some of the opinions and conclusions may seem at variance or in conflict with others, but that will not disturb the packager who approaches his problems scientifically. He will consider what others are doing, thinking and planning, then he will weigh each condition or expression for its bearing on his own situation—and will ultimately choose the course best suited for his product and merchandising program.

CREDITS: Stock bottles shown on p. 97, Maryland Glass Corp., Baltimore, Md.; on p. 98, Swindell Bros., Baltimore. Wildroot bottle, Owens-Illinois Glass Co., Toledo. Carstairs bottle, Armstrong Cork Co., Lancaster, Pa. Design of bottle and label for Kreml, Georges Wilmet, New York. New labels for Thermopine and Brook-Maid designed by Egmont Arens, New York.



This month's COVER PACKAGE*

No. 12 of a series

THE PROBLEM:

A large cigar-manufacturing firm is presumed to be planning the introduction of a new brand, as yet unnamed, to satisfy consumer demand for a fine cigar in the medium-priced bracket. It is intended that the price, quality and appearance of this item shall make it attractive for gift purposes—yet at the same time, year-around volume sales to regular smokers must be maintained to permit the low price. Required is something new in packaging that will meet both objectives. The package must attract attention, insure brand-name memory and permit gift tie-in suggestion, bearing a brand name that will convey confidence, quality and satisfaction.

THE SOLUTION:

The designer suggested the name "10 Downing," because of its immediate association with Winston Churchill, who personifies cigar-smoking satisfaction in the popular mind. Using this brand name in bold poster style, he created a cigar box of conventional heavy-ply paperboard with an over-all wrap printed in gold, red and black on a light wood-grain background. The style of lettering and incidental decoration, including the British lion, were carefully selected to convey the impression of a high quality, prestige product. The edging tape repeats the brand name in a decorative pattern in gold, green and black. The cigar label (not shown) would be a small replica of the package design. This box would take care of regular sales and for gift occasions the dealer would be supplied the handsome humidor box in which the regular package could be encased, as shown on the cover, at an added cost—either separately or as a special combination offer. The lid of the humidor is made of clear acrylic, compression molded and piano-hinged to the base, which is molded of opaque phenolic with a mahogany wood grain. The handle, also made of phenolic, is hollow and is ingeniously designed to hold a ceramic humidifying plug, suspended on the end of a screw. Manufactured in quantities it is estimated that the plastic boxes would cost about \$2 each, permitting resale at a very attractive price.

THE DESIGNER:

The name of Frank Gianninoto, director of Frank Gianninoto & Associates, New York, has been associated for 25 years with packages bearing some of America's most famous brand names in many product fields. Among his recent productions are Birds Eye frozen poultry cartons (Oct., p. 102); Ritter labels (June, p. 128) and House of Herbs labels (April, p. 200), which won an award in the recent *Spice Mill* competition. He has turned out many notable packages for General Foods and numbers among his other clients American Home Foods, Best Foods, Blue Bell, Borden, J. A. Folger, 40-Fathom Seafoods, D. Goldenberg, Holgate Bros., Edgar P. Lewis Pepperell, Tykor and Underwood Corp. He is an executive member of the American Designers Institute.



FRANK GIANNINOTO

* Brand and company names used in the hypothetical design are purely fictitious; the design remains the property of the designer who conceived it for this cover illustration. Any resemblance to any existing package is purely coincidental.

Pre-sealed hosiery

Packages are made of 0.003-gauge acetate to give that "soft" feeling desirable for textile packaging. Paperboard ends are secured to the cylinder by beaded edges. Color and price are printed on ends.



One of paperboard ends is of frangible stock, made with circular die-cut hole which provides a finger hold for easy removal by the purchaser.

Inner acetate liner shields stockings from damage and makes them slip out of container easily.



Does the transparent cylinder pack adopted by B. Altman & Co.

forecast an era of automatic merchandising in department stores?

The pre-sealed hosiery package and the practice of selling from samples is gaining wide acceptance in hosiery merchandising, but the form of such packaging is still in a transitional stage.

Notable examples to date have been the more or less generally accepted sealed printed cellophane or acetate envelope made to fit standard hosiery shelf boxes and the paperboard tray package automatically cellophane wrapped adopted by Cannon Mills and Shannon Mills (see "Textiles—A Field Day for New Packaging," MODERN PACKAGING, June, 1946, p. 97).

A current revolutionary newcomer is the tubular transparent package adopted by B. Altman & Co., New York, for its private brand Balta nylons. It is said to be the first hosiery package designed for possible future automatic dispensing similar to the gravity dispensing of cans and jars in an automatic food store.

The Altman package, it is claimed, is not merely a promotional idea, but the result of an engineering approach to the whole problem of hosiery manufacture, handling and selling by an engineering firm, whose design of the new package was an important part of that program.

The problem was tackled not only from the consumer-preference angle by interviews with salespeople and shoppers, but from the standpoint of the 8% losses in hosiery merchandising between mill and consumer due to damage from snagging of stockings when they are taken out of boxes to be ticketed, mismatching of sizes, snagging in handling for consumer inspections, etc.

The solution was to develop a pre-sealed package which would eliminate all hazardous handling, be more convenient for sales forces, meet all consumer requirements of an attractive package, give visibility to the merchandise, even have appeal as a gift package—yet be produced at a cost comparable with that of conventional stocking packages.

The new package to meet these requirements consists of a transparent color-printed acetate tube with paperboard ends, permitting the stocking colors to be seen through the acetate, yet with a sufficient area of printing over the end areas to cover up the folds. Each package contains one pair only. The customer makes her selection from samples on the counter, but receives the sealed tube with the stockings untouched from the time they left the mill.

Color and size of the hose are printed on end disks which are secured in place by the beaded edges of the acetate. One of the end disks is of frangible stock, made with a die-cut hole, which provides a finger hold for easy removal. These paperboard disks protect the tube head from damage in opening and also permit the use of unusually thin acetate film (0.003 gauge) for a



SEES—Sales person shows samples to customer.



BUYS—Customer gets completely sealed package.



TAKES HOME—Convenient package fits in purse.



Giant package in window display tells story of the new packages to Fifth Avenue shoppers. Customer appeal of new package is indicated by sales results, which show that estimated stock for a two months' period lasted only nine days.

package of this type. This naturally reduces material cost, but that is not the prime purpose of the thin sheeting. The thinness of the tube gives the package a "soft" pliable feeling—a characteristic that consumers show a preference for in textile packaging.

The packages are filled by means of a hollow cylindrical form, half of which is secured to the work table, the other half opening free. The stockings rolled around a stiff paper insert are then placed on the opened form, where a thin sheet of acetate to become a liner has been previously placed. The form is closed, the tubular acetate container is placed at one end and the stockings are pushed through the form into the container. The paper insert expands as a spring member to hold the stockings smoothly against the acetate. The thin acetate liner sheet prevents the stockings from wrinkling, makes them slip easily into the container and acts as a shield to prevent damage when the stockings are withdrawn from the package.

The containers are supplied with the bottom disk secured. The frangible top disk is inserted by the operator after filling. Fabrication of the containers required considerable development work on the part of the supplier to make a package of this type in quantity from such thin-gauge material.

This type of packaging is said to compare favorably in cost with the transparent envelope type of packages now stocked in shelf boxes. At present the new stock-

ing packages are stocked in drawers behind the counter. It is believed that eventually they will be a space-saver, if arranged on gravity-feed shelving, because they will permit utilization of the shelf space now wasted behind conventional hosiery boxes.

Success of the new packaging is indicated by the sales results of the first few weeks. It is said that 4,300 pairs were sold the first three days and that within nine days the estimated stock for a two months' period was completely gone. There were no returns and only one customer demanded to have the package opened before she would purchase the stockings.

This transparent cylinder package with its gay red printing provides an attractive gift setting for stockings which proved popular during the holiday season.

The almost ringless perfection of nylon hosiery has been a great boon to the pre-sealed packaging of stockings and in order to offer nylons in a sealed container, the mills which supply Altman's have made important changes in throwing, knitting, drying, boarding and inspection procedures to supply a stocking with legs and feet knit in a single operation, eliminating the conventional joint between leg and foot, and to assure uniformity of color and other details of manufacture.

CREDITS: Design, engineering and procurement, Philip E. Wilcox, New York. Containers, Kellogg Container Division, U. S. Envelope Corp., Springfield, Mass. Acetate material, Lumarith, Celanese Corp., New York.

PACKAGED TREE

Resourceful Seattle firm inaugurates a mail-order business in Christmas trees, each protectively sealed in a compact, wax-lined carton

Commercial Christmas trees normally are cut in October and November, shipped in bulk in car lots and sold at retail stores and corner stands for the householder to lug off. During bulk shipments, the tightly packed trees hold their moisture well, but when set up for retail display, they dry rapidly. As a result, trees soon become fire-dry and it is not uncommon for them to begin shedding needles even before the decorations go up.

Intent on delivering a forest-fresh tree, directly from woods to homes, a new company, Pacific Evergreens, Inc., of Seattle, this season is pre-packaging individual Christmas trees and shipping them with a bundle of forest greens in a moisture-sealed container.

Packaging requirements are stringent. Each package must hold one Douglas fir tree compressed to the smallest size practical and an assortment of Northwest evergreens, a sprig of mistletoe and a knocked-down stand. The package must be moistureproof, holding in the natural moisture of fresh-cut greens and the added moisture of a canister fitted to the tree butt and filled with wet peat moss. Lightness and strength are important.

The method of handling pre-packaged trees was developed before the war, but commercial application was held up until this season. Six months ago the package supplier began working on the problem. The container as finally developed is a 200-lb.-test corrugated box of regular slotted construction. The cross section is square, 7 by 7 in., which allows all the flaps to meet. The box comes in lengths of 3, 4, 5 and 6 ft. Joints are taped and the box is delivered knocked down to the packaging point at Shelton, on Washington's Olympic Peninsula.

Various linings were tried first to provide a moisture seal. But the cheapest and most practical seal was found to be paraffin applied in a hot waxer to the interior surface.

To prevent scratching of the paraffin and a breaking of the moisture seal, the package is filled through one end with the aid of a specially designed, funnel-shaped, metal loading tube. The stem of the tube is square, exactly fitting into the box for its full length. The tree, greens and stand are slid into the large end of the loading tube. Then the tube slips into the shipping container, the tree is held in place and the tube is withdrawn. Because of the unusual suppleness and re-



Regular slotted corrugated carton is made moisture retentive by an inside coating of paraffin wax and tape sealing of all joints. Labeled in red and green, this package delivers a fresh Douglas fir Christmas tree anywhere in U. S.

silience of Douglas fir, the tree branches spring back into their original shape immediately on being unloaded.

Trees are not cut until orders are received, the company says, and shipments go out the first 10 days of December by express and mail. Tests show that on delivery the tree appears as fresh and fragrant as when cut and that the needles will not ignite from a match or candle.

Bright red and green printing on the container gives the package a festive appearance. Trademarked "Giftree," the tree may be sent as a gift if desired. It sells at \$4.50 to \$7.50, depending on size, post-paid anywhere in the United States.

Pacific Evergreens, Inc., is headed by Milo Morris, Seattle, who designed the loading tube and has patents pending on this and the stand.

CREDIT: Container, Container Corp. of America, Seattle Plant.

PRODUCE PACKAGING



how and where?

Big bottlenecks in produce distribution channels are the metropolitan wholesale markets; New York's Washington Market is typical. Wholesalers want to do pre-packaging, but plead that they do not have the room or facilities for it. PHOTO COURTESY PRODUCE NEWS.

by FRANKLIN GINDICK

Pre-packaging improves the sales possibilities of lettuce and cauliflower and eventually will be standard practice throughout the produce industry. This is the belief of the majority of lettuce and cauliflower producers in California and Arizona, according to an extensive survey conducted for Food Machinery Corp.

Control of quality, development of better packaging materials, decay control, refrigeration, changes in harvesting and packing methods, labor and transportation are considered by producers as the most important problems to be faced in the pre-packaging of these commodities at shipping point.

The purposes of the survey were to determine the extent to which pre-packaging of head lettuce and cauliflower would develop, where it would most likely be done and the problems to be solved before packaging becomes a widespread reality. Since lettuce and cauliflower are perhaps the most difficult of all commodities to package at the shipping point, it appeared that packaging, if successfully applied to these products, could

be rapidly extended to other kinds of produce as well.

Surveys were conducted among growers and shippers, produce wholesalers and retailers. Growers and shippers were surveyed through personal interviews and the wholesalers and retailers by questionnaire. The producer survey was conducted in California and Arizona, the country's leading lettuce- and cauliflower-producing states, while the wholesaler and retailer survey covered a representative group of the country's leading consumer areas.

Among the California-Arizona shippers, 85% of those replying to questions on the future of lettuce pre-packaging and 94% replying on cauliflower expressed the opinion that packaging will add to the sales possibilities of these commodities. Only a few, however, contemplate engaging themselves in pre-packaging on a commercial scale in the foreseeable future. The average shipper attitude in this regard is one of "watchful waiting" for significant developments which will indicate the speed and direction of consumer packaging.

Most shippers agree that cauliflower offers better opportunities for packaging than lettuce. This is due to the large percentage of waste involved in the present uneconomical method of shipping this commodity. Approximately 60% of a crate of cauliflower consists of the outer wrapper or jacket leaves. Elimination of these leaves at shipping point will reduce transportation costs enormously and offset additional costs of packaging. In addition, savings can be made in packaging materials. Cauliflower is now shipped nine to 12 heads per crate. With pre-packaging, 24 heads can be shipped in the same sized crate.

It is significant that 22 out of 34 shippers of lettuce and 22 out of 33 who ship cauliflower are at present in favor of packaging these commodities at points closest to the consumer in order to maintain quality to the consumer. However, all of these shippers want their commodities eventually to be packaged at the shipping point. If packaging is permanently established at the market, the producer will find himself in the role of one supplying bulk produce to a processor, with no identity and little voice in the marketing of his products. The average shipper is aware of the possibilities of product identification and consumer advertising, leading to better prices and wider markets, afforded by pre-packaging and is most anxious to take advantage of them.

Under present rail schedules of eight- to 12-day delivery to most Eastern markets, methods of wet refrigeration and the length of time required to move produce through wholesale and retail channels, lettuce and cauliflower cannot be packaged at the shipping point and delivered to the consumer in quality condition, they feel. That is why the majority of shippers interviewed believe that packaging must be initiated at the market. In time, as problems of packaging are solved, transpor-

Franklin Gindick, Los Angeles marketing consultant to the produce industry, spent over three months on this survey under commission from the Food Machinery Corp., which has graciously consented to the publication of this summary in MODERN PACKAGING as a service to the entire packaging field.

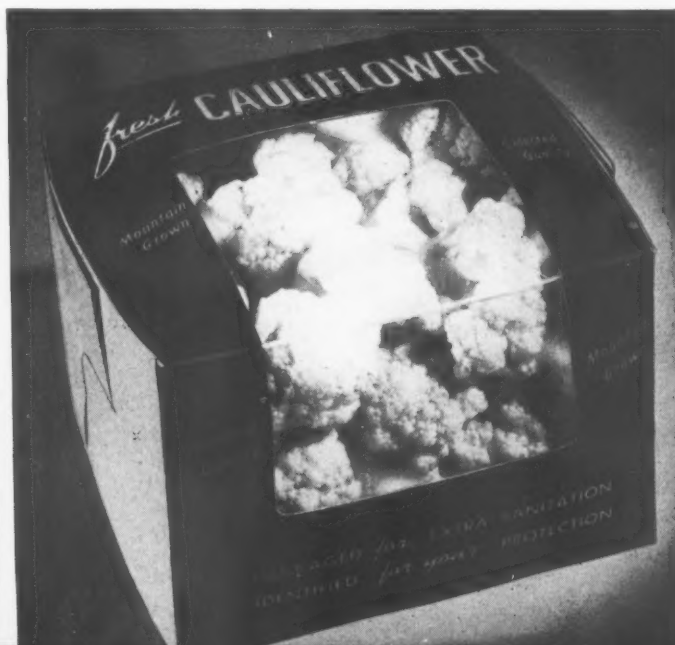
tation schedules improved and better and more continuous refrigeration provided, packaging will take its rightful place at the shipping point. Shippers believe that these conditions will not occur until considerable experimental work (such as now being conducted by the Western Growers Experimental Institute) is completed.

Control of quality from shipping point through to consumer and selection of lettuce with proper carrying qualities are considered by shippers as the foremost problems in packaging lettuce and cauliflower at the shipping point.

Most shippers consider that lettuce, because of its tendency toward wilt, slime and red butt, is the most difficult of all commodities to package. Its deceptive appearance makes determination of its ability to carry very difficult. Quality will vary from patch to patch, depending upon farming practices, fertilizer application, moisture content, internal plant disease and other factors.

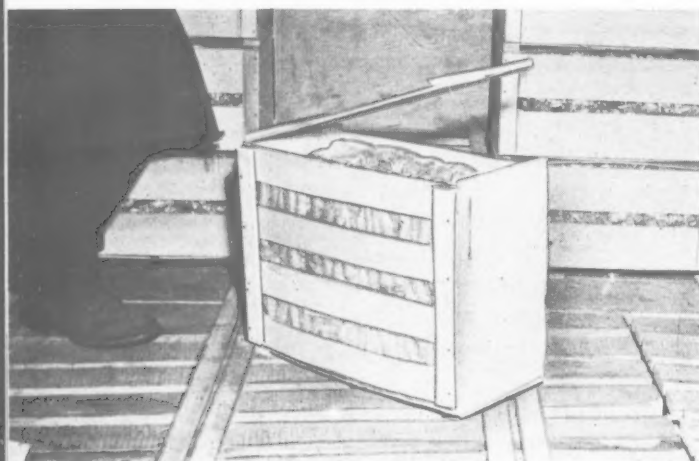
Two heads of lettuce that are similar in appearance and solidity may differ greatly in ability to be packaged and shipped successfully to market. Many shippers consider it important to develop methods of chemical and physical analysis which will determine

Lettuce and cauliflower are among the most difficult of all produce products to hold in a consumer package. They are, therefore, being used in West Coast shipping trials. Many favor a simple wrap for trimmed head lettuce in heat-sealed transparent film (left). Cauliflower offers a big chance for freight saving, since 60% of the bulk can be eliminated at the shipping point with pre-packaging. Some retailers and wholesalers favor the window carton (right), but the majority of them feel that any type of carton or tray is unnecessary for cauliflower. PHOTOS COURTESY CELANESE PLASTICS CORP.



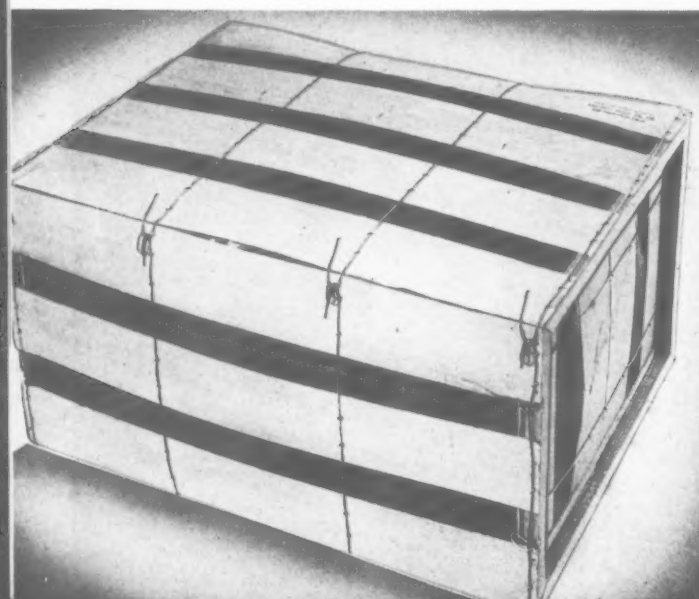


Traditional bulge pack of non-packaged lettuce contains from 48 to 60 heads. The "bulge" is one of chief causes of damage in shipment; pre-packaging may eliminate it. (See next photo.)



New light-weight, sawn-nailed crate especially developed by Wooden Box Institute for shipping tests of pre-packaged produce by Western Growers Assn. Shown here containing packaged celery, it is also used for wrapped head lettuce, holding from 18 to 24 heads without bulge.

Also used in current shipping tests in this all-bound crate developed by California Barrel Co. which packs 48 heads of lettuce without bulge.



what lettuce should be packaged. Growers also believe that methods of decay control, preventing bacterial growth after packaging, must be developed.

Bacteria thrive on heat and unless the temperature of each head is immediately reduced after harvesting, causes of deterioration will become sealed and develop in the package. Therefore, most shippers consider it imperative that methods of pre-cooling be adopted which will eliminate field heat from the lettuce as soon after harvesting as possible.

Much of the field packing now practised would be eliminated. Cauliflower, at present packed largely in the field, would be hauled to the packing sheds after harvesting, most of the outer jacket stripped and the curd pre-cooled. This would involve almost a complete change from present methods, entailing the use of additional packing-house labor and resulting in some increase in cost. However, subsequent savings in packing materials and freight charges would more than offset these additional costs, it is believed.

Similarly, packaging of lettuce would entail numerous changes. After the lettuce has been harvested and delivered to the packing house for pre-cooling, the major operations involved would be trimming and sizing. This would eliminate many present labor operations and packing and handling procedures. After trimming and sizing, the lettuce would be wrapped in transparent film by automatic packing equipment and conveyed and placed—perhaps by machinery—in shipping containers. Generally, shippers believe consumer packaging would permit a greater degree of mechanization of operations than now exists.

Most shippers are of the opinion that the present method of "bulge" packing from 48 to 60 heads of lettuce in Western L. A. lettuce crates will disappear and new, light-weight crates able to withstand shipment and taking from 24 to 30 heads in a "place-pack" arrangement, developed. Over all, it appears, consumer packaging of lettuce can possibly be done at lower costs than present methods of bulk packing in conventional crates.

Some shippers feel that the necessary changes in packing houses would be impossible of achievement by most members of the industry because of the heavy initial investment involved. Others were less troubled about this aspect of packaging at shipping point, believing that changes could be gradually achieved at reasonable cost. Several shippers believe the logical procedure would be the organization of cooperative packing sheds to be used by groups of shippers, or the establishment of independent commercial pre-packagers who would package for various shippers on a fee basis.

Shippers unanimously agree that faster transportation to distant markets is absolutely necessary. Some shippers feel that improvement in transportation schedules will be realized within the next five years; that the railroads, airlines and trucking companies are making rapid strides in speeding up delivery. Not all shippers share this optimistic view.

Shippers also unanimously agree that continuous refrigeration from shipping point to consumer is a definite "must." After elimination of field heat, temperatures must be maintained at constant levels throughout the entire period of transportation, particularly through wholesale and retail channels.

Many shippers expressed the view that equipping more refrigerator cars with air-circulating fans would materially improve in-transit refrigeration. Most wholesalers at terminal markets are presently not equipped with refrigeration facilities to maintain proper temperatures. Retailers are also lacking in this vital equipment and it will be some time before widespread installation of self-service refrigerator cases is achieved.

Packaging of lettuce and cauliflower, it is felt, will never be successful at the shipping point until there is a change in labor practices in the packing sheds, accompanied by modification of present methods of compensation by piece work. Consumer packaging of both lettuce and cauliflower require the utmost caution in selection of quality, trimming and handling. Present labor practices, aimed toward highest possible output in order to achieve high daily wages, do not encourage that sort of care.

All of the shippers interviewed believe that packaging cannot be done on an economical basis unless it involves volume operations, including all of a crop that is of sound quality. The waste would be left in the fields or disposed of locally. It would not be economical to package only the "cream of the crop," since the premium in price which would be required for this portion of production would tend to depress the market level for the remainder of the crop. Estimates of the volume of lettuce, for example, likely to be packaged when this method of merchandising has been proved range from 60 to 80% of the total crop.

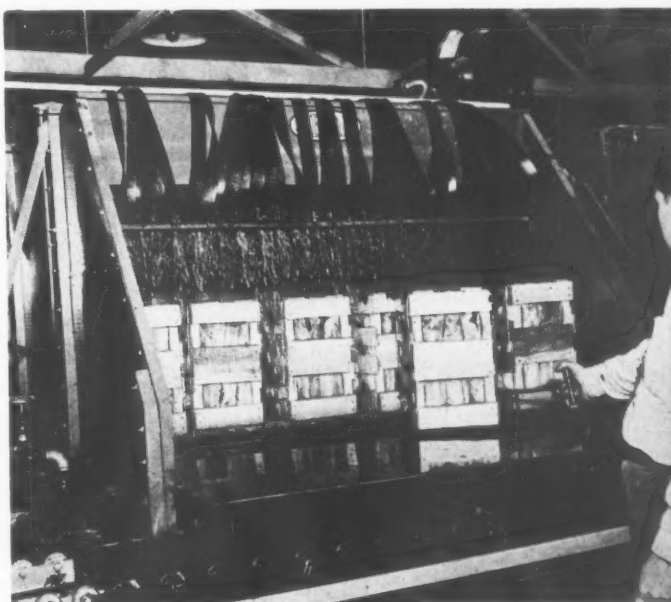
Many shippers believe that if packaging is proved feasible for 10 to 15% of a crop that it will also be feasible for the remainder and all operations will be rapidly converted to a packaging deal. This, of course, is dependent upon solution of the problems outlined above.

The average shipper of California-Arizona lettuce packs from seven to 10 cars per day and 10 to 12 cars at peak. Machinery will be required to handle peak operations. Since present equipment can package at a rate of 30 to 60 heads per minute, or 30 to 60 crates per hour, one machine could package only from one to two cars of lettuce in a 10-hr. day, based upon present loading per car. Based on an average of eight cars per day, four to eight machines would be the average requirement per shipper and at peak loading six to 12 machines would be required. This obviously indicates the need for revolutionary changes in present packaging equipment and development of equipment which would package from one-half to a full carload of lettuce per hour.

Wholesaling and retailing of produce must be greatly altered and improved if packaging is to be widely adopted. Of a total of 33 shippers expressing their views on this subject, 26, or almost 80%, hold that opinion. Exceptions are found in the operations of



Lettuce being trimmed prior to packing. Pre-packaging requires utmost care in trimming and the selection of "packagable quality" lettuce.



Equipment such as this Steri-Cooler (Food Machinery Corp.), which pre-cools and sterilizes produce in one operation, will be necessary if shipping-point pre-packaging is to be successful.

some service wholesalers and a few terminal-market operators, many of whom are presently equipped with cold storage, repacking equipment, delivery service directly to retailers and retail-dealer service.

Western Growers experiments

Most of the problems of pre-packaging at shipping point emphasized by shippers are being directly tackled in the research program of the Western Growers Assn. Work has been going on for over a year in the laboratories of the Western Growers Experimental Institute, the association's research division, in methods of pre-cooling, packaging, controlling decay and development of high-speed packaging equipment which will meet requirements for volume production.

Results of recent experiments in shipping vegetables

packaged at shipping point indicate that many of the problems discussed by shippers in this survey can be solved. Five car lots of fresh vegetables, including both packaged and non-packaged commodities prepared for shipment under supervision of the Experimental Institute, were shipped very recently to five different markets—Boston, Columbus, Cincinnati, Detroit and Minneapolis—from nine- to 12-days distant from the shipping point at Molus, Calif. Commodities shipped included lettuce, cauliflower, broccoli, celery, carrots and brussels sprouts.

The produce was treated for decay control, washed, pre-cooled and dried with specially designed equipment, some packaged in tested films by newly developed, high-speed packaging equipment and packed in new, light-weight shipping crates. The merchandise was loaded in cars with improved carloading methods.

All of the produce was shipped in the newest refrigerator cars, each equipped with Preco air-circulating fans. No crushed ice was packed either in the crates or on top of the load. The cars were pre-cooled, while stationary, with Preco equipment and shipped under standard refrigeration.

Under minute observation along the way and upon arrival, the produce is reported to have reached destinations in excellent condition in all respects and to have been accepted readily by consumers.

Results of these experiments are very encouraging and substantiate the finding of this survey that in time lettuce and cauliflower can be packaged at shipping point and successfully shipped to consuming markets. Of more immediate significance, however, is the fact that Western vegetable growers and shippers, recognizing their problems, are making efforts to solve them.

Wholesalers' viewpoint

Of the 39 replies received from produce wholesalers on the question of whether packaging would increase the sales of lettuce and cauliflower, 28, or 75%, of the wholesalers answered "yes" and the remainder "no." The principal reason for favoring packaging was the belief that these products could be delivered to the retailer in 100% salable condition, quality of the produce would be excellent, the package would possess enormous consumer appeal and consumers would generally receive better quality and cleaner produce. Packaging would also cut down losses and would permit the retailer to spend more time on sales effort, the wholesalers said.

The principal qualification to this answer is that quality must be maintained. Wholesalers assume in their answers that only the best quality produce will be packaged and the consumer will receive satisfaction from all her purchases so she will buy more and consume more.

As to where packaging should be done, two out of three wholesalers believe it should be done at the market or point closest to the consumer. Only 13 out of 38 thought it should be done at the shipping point. Difficulty of quality control, slow rail schedules and inadequate refrigeration were the principal reasons cited by

the majority of wholesalers who believed lettuce and cauliflower should be packaged at the market, although many of them recognized that from an operating standpoint the most natural and economical place to package would be the shipping point.

Costs of packaging would be greater at the market, the wholesalers said, because of duplication of packing and higher labor costs, but quality delivery would be assured. As improvements in distribution occur, packaging may gradually be moved back to the shipping point, they suggested.

Packaging of cauliflower at the shipping point is looked upon with more favor by wholesalers than is lettuce. This is due to the substantial savings in freight, amounting to almost 60%, which can be effected through stripping of the wrapper leaves at shipping point and the savings in crates. From nine to 12 heads of cauliflower with wrappers are now packed in a pony crate. After stripping of the outer leaves and wrapping in cellophane or parchment, approximately 24 heads can be placed in the crate, thus eliminating the cost of one container.

Wholesalers believe many changes in shipping practices would be necessary if packaging is to be economically done at the market. Lettuce as presently packaged in L. A. crates at the shipping point costs about two cents a head and cauliflower about five cents a head. Obviously, these expensive packing operations at shipping point would have to be eliminated if repacking in consumer units is to be done at the market. Market repacking will cost an average of three to five cents per head. This cost, combined with initial packaging costs at the shipping point, will impose a burden which cannot be passed on to the consumer. In order to reduce initial costs at the shipping point, wholesalers believe that a method should be devised to ship lettuce and cauliflower in bulk or in containers holding larger quantities than do present crates. Whether this method of shipment will prove successful is unknown, since very few shipments of this type have been tried.

Two-thirds of the wholesalers stated that it would not be difficult for them to set up a pre-packaging operation. The principal reason for those encountering difficulty in organizing pre-packaging operations is lack of space. Replies from wholesalers located in terminal markets such as New York, Pittsburgh, Chicago, etc., indicated numerous difficulties in setting up packaging operations such as scarcity of space, high labor costs, lack of adequate refrigeration equipment and delivery facilities, etc.

The majority of wholesalers favor lettuce and cauliflower wrapped in transparent or other wrapping material without the use of a boat, tray or carton. Of 33 wholesalers replying on this question 21, or 63%, indicated they would prefer the wrap without a boat. The remainder indicated a preference for the overwrapped boat. Some of the wholesalers believe that the overwrapped boat is easier to handle at retail because of ease of display. Others feel that the wrap without the boat affords greater visibility of the product.

To check independently retailers' enthusiasm for packaged produce, questionnaires were sent to a representative group of retailers and retailer organizations. Questions were asked on consumer acceptance of packaged lettuce and cauliflower, possibilities of increased sales, price differentials, types of packages preferred, who should package these commodities and experience in packaging.

Retailer views

Replies were received from 38 retailers, of which 16 were independents and 22 chains. Included among the chains were six of the leading chain-store organizations, representing approximately 10,000 stores. Interest in the subject appeared greater among the chains than the independents.

Results of this survey correspond very closely with results from similar surveys previously conducted by other organizations, adding weight to the belief that retail dealers of fresh vegetables generally desire packaged produce.

Of the 38 retailers, 87% believe that the consumer would prefer to purchase lettuce and cauliflower in packaged form. This belief is common among both chains and independents.

Of the retailers, 16, or almost half, had had experience in the sale of pre-packaged lettuce and cauliflower. Most of the others had had some experience with packaged items such as tomatoes, spinach, salad mix, potatoes and citrus.

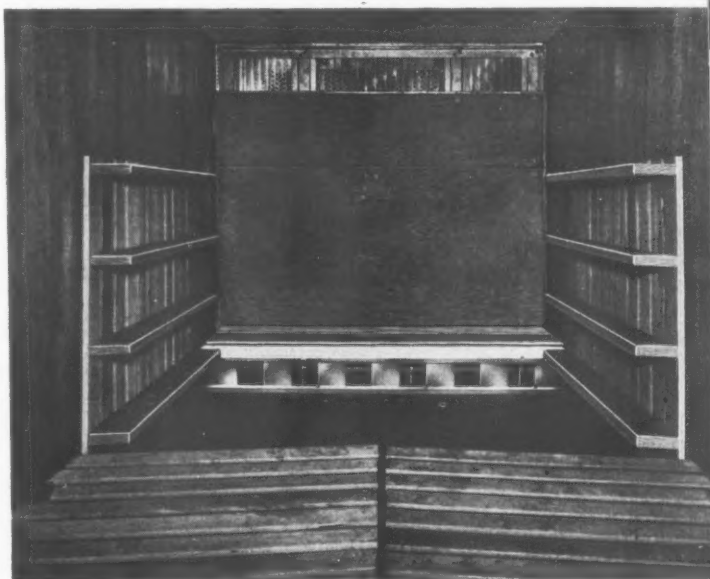
Of 37 replies to the question whether packaging of lettuce and cauliflower would increase sales of these commodities, 31, or 84%, believe that it would and six, or 16%, believe that it would not. Five of the negative replies were from chains and one from an independent. Over 75% of the chains and 90% of the independents see this method of merchandising as a means of increasing sales.

Results of actual experiments of eight Midwestern

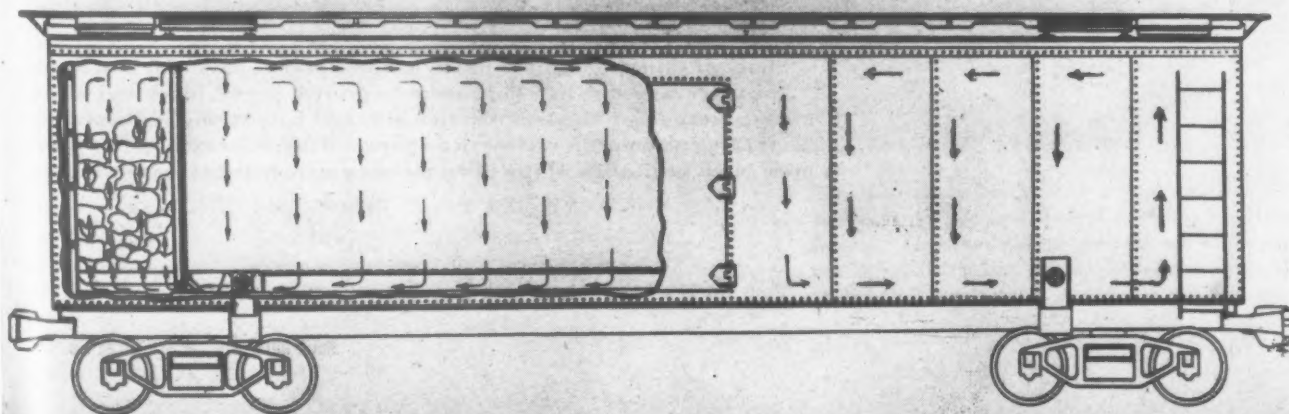
independent grocers in selling packaged lettuce and cauliflower indicated substantial increases in sales. One chain reported a 20% increase in lettuce and cauliflower sales after a year of packaging, another a 35% increase in lettuce sales after a week of packaging, another doubled its sales of cauliflower over the previous year's sales and another reported it has sold as much packaged lettuce and cauliflower in four stores as 10 stores sold unwrapped.

An important part of the answer to whether packaging will really take root in the produce industry depends upon the price at which packaged produce will be offered to the consumer in competition with bulk. If the consumer is willing to pay a premium for packaged produce of sound quality, the development toward pre-packaging will be greatly hastened, since it will lessen the packers' chances of loss.

Replies from retailers in this survey indicate that at present the consumer is willing to pay a premium for packaged lettuce and cauliflower. Of 36 replies received to this question, 26 stated that the consumer would pay a premium for good quality packaged lettuce and cauliflower and 10 answered to the contrary. About half of the replies expressed an opinion on how much premium could be secured. The average was about two cents per head, but the range was from "slight" or "not much" to five (Continued on page 216)



One of the new developments most significant to shippers is the Preco refrigerator car with air-circulating fans installed under slatted floor racks. It provides uniform low temperatures from end bunkers without use of top ice. Interior view shows floor racks raised to reveal blower assembly fastened to main floor. Diagram below shows how air circulates throughout the car.





The shape of things to come is found in these packer-packaged link meats in trays overwrapped with cellophane roto-printed in red, black and white. Packages meet all government requirements and have strong eye appeal for the average customer in self-service stores. Window section of wrap has a price block printed in white. Two recipes are included on each wrapper.

The Hunter Packing Co.'s judgment as to the future of packaging in the meat industry is evidenced by an investment of \$400,000 in a plant and packaging equipment and the current introduction of what it believes to be the first line of packages completely and specifically designed for self-service merchandising.

For the present, the package line is limited to wieners, sausages and other cured meats, but Hunter has done extensive research on the packaging requirements of both fresh and frozen cut meats and there is more than a hint that the same type of package will be found later on steaks, chops and roasts bearing the packer's label.

The new Hunter packages used for link meats is basically the same as has been found most successful for in-store pre-packaging of fresh meats—a rigid paper-board tray overwrapped with heat-sealed cellophane. But here for the first time is a colorfully printed overwrap that creates a distinct package family and merchandises the packer's name and trademark rather than the retailer's.

Every package carries recipes and a special pricing

Experimental package for chili, still subject to change, is made of heavy-gauge aluminum foil. Crimped-on lid is lithographed in Hunter colors.



MEATS

Brightly printed cellophane overwraps for items pre-packaged by the packer point the industry's growing opportunity in today's self-serve trend

panel to assist retailers in pricing the products before placing them in their refrigerated, open-type, self-service cases for sale.

To introduce this new idea, the Hunter company, which has its plant at East St. Louis, Ill., hired the big St. Louis Arena and was host last month to more than 5,000 food retailers at an all-day open house.

Hunter, with a large Midwestern sales territory, has been developing practical pre-packaging methods since the end of the war. Prior to the war, Frank A. Hunter, Jr., young president of the firm, made a survey of 400 housewives in the St. Louis area which convinced him that the meat packer could play a much more direct role in supplying the housewife. From that survey materialized the present packaging program. Long interested in the development of self-service selling through supermarkets, Mr. Hunter retained a merchandising and promotion agency experienced in the food field to design and develop the packages illustrated here.

It was desired, first, to develop a package which would "keep on selling" in the housewife's refrigerator, identifying the meat products with Hunter Packing Co. until the last frankfurter or pork sausage had been used. Second, Hunter wanted an attractive, easy-to-handle package that would prove equally acceptable to the self-service supermarket and the small, corner "Mom and Pop" type of grocery store. Finally, of



The huntsman-with-horn design motif is carried through on the new, colorful wraps for Hunter's hams. The smoked-ham wrap has white ends to distinguish it from the cooked-ham wrap, which is of solid red. Both wraps are entirely opaque.



Wrap for sliced bacon is simple and impressive. The use of a string tie adds a decorative note.

course, it was essential to develop a package which would keep the product fresh for extended periods, give undeniable proof of the manufacturer's precautions and meet with all requirements of the Department of Agriculture, which polices the handling of all meats.

Shown at the recent open house were nine packages, which eventually will be enlarged to 12. Packaged in 1-lb. units are wieners, skinless and natural-casing frankfurters, pork sausages, chili and sliced bacon. There are two different types of link sausage, requiring packages of different shapes. All these packages are automatically wrapped. Most of these items had previously been packaged in bulk in 5- and 10-lb. cartons, which the butcher merely opened to display the meats in his refrigerated service cases. Now, however, Hunter recommends that the dealer build up pyramid displays of the 1-lb. packages, for extra eye appeal and easier handling, whether the operation is service or self-service.

More conventional, but dressed in cellophane wraps similarly printed and bearing the same huntsman-with-horn trademark, are the packages for two types of whole hams (smoked and pre-cooked) and sliced bacon.

Distinctly unconventional is the new experimental package for a 1-lb. brick of chili. Made of heavy gauge aluminum foil—heavy enough to be semi-rigid—it consists of two parts: a tapered pan-like base and a flat lid which is brilliantly lithographed with the Hunter trademark and colors. Chili is poured into the base in a molten state; rapid heat transfer through the metal makes it possible, it is said, to chill the product

so quickly as to prevent the usual separation of meat from the fats and juices. When the chili has cooled and hardened, the lid is applied by crimping around the top rim of the base. The lid has a tab at one side to facilitate removal. In addition to its striking eye appeal, the package is expected to give long shelf life to the chili, which is kept under refrigeration like any other fresh meat, but not frozen. At the time this article was prepared, this package was still under development and subject to change, but Hunter officials said they expected to have it on the market in approximately the form illustrated by Dec. 15.

All of the paperboard trays used for meats are of the quick set-up, push-in type. They are set up and filled by hand and the LST cellophane overwrap is applied by machine.

The overwrap owes its appeal not only to the catchy Hunter trademark, but to the distinctive colors used. The red shade known as "hunter pink," because of its use traditionally on fox-hunters' coats, is a natural to tie in with the name and trademark. Formerly the principal color of all wraps, it is used with white and black in a three-color rotogravure printing job. Because of government regulations affecting meat, the printing must be done on the exterior rather than the interior surface, but this detracts little if at all from package appearance, since the matte printed surface contrasts nicely with the glossy plain cellophane areas.

In the window section of the wrap a price block is printed in white on which the butcher may apply prices with grease pencil, lead pencil, ink or rubber stamp with equal facility.

A definite innovation in this type of package is the inclusion of two recipes on each wrapper, a proved device to attract the housewife's interest and encourage her to get maximum tastiness from her purchase. For example, on the wiener package, one recipe instructs the housewife to bring a pan of water to a boil, place wieners in the boiling water, then turn off the heat and let them stand for eight minutes—in place of the usual practice of boiling the wieners until the skins split. On the same package, another recipe advocates stuffed wieners, split lengthwise, filled with bread stuffing and wrapped in a slice of Hunter bacon for broiling.

The packages have been thoroughly market tested, with excellent results. The bright eye appeal of the Hunter pink color, the complete information about the products and the recipes have shown themselves to have strong appeal for the average woman customer in the self-service store, according to Mr. Hunter.

Production is centered in the new \$400,000 "sausage plant" at the East St. Louis headquarters. The sausage plant prepares link sausage, pork sausages and all frankfurters and wieners in a series of production rooms around the packaging room, which is a 91-by-24-ft. enclosure in the center of the building. Here have been installed a U-shaped double conveyor and an automatic cellophane-wrapping and heat-sealing machine which will turn out up to 100 packages a minute.

By far the most difficult problem has been the large

amount of hand work involved in sausage preparation, plus the fact that in pre-packaging the 1-lb. packages, it is necessary that every meat item show almost perfect uniformity. In order to maintain the stated weight, it is necessary to place 12 wieners of exactly the same size, length and weight into each package.

Therefore, in the comparatively small packaging room, more than 40 employees are required. The production line consists of a two-level, U-shaped roller conveyor, 60 ft. long, which leads to a 12-ft. weighing table and from that point to the wrapping machine. A total of 27 girls must be stationed along the conveyor to carry out the job of inspection, skinning "skinless wieners," preparing pork sausages, links, etc.

Sausage of various kinds, as prepared, is brought in stainless-steel carriers from the sausage room and distributed in stainless-steel pans along the lower level of the double conveyor. Here girls skin the wieners, add casings, form the sausages, etc., until a pan is complete, then lift it 2 ft. to the top of the roller conveyor, where it rolls by gravity around the U-shaped form to the weighing table. At the weighing table, 16 girls are required to cut, inspect and weigh every single meat item which goes into any of the packages. Since production is expected to concern chiefly pork sausages and the three varieties of wieners and frankfurters,

chief responsibility of the weighing girls—eight to a side—is to select uniform sizes, fit them carefully into the package and weigh each to 1 lb. exactly before passing it into the wrapping machine.

The company is attempting to gain permission from the government for a package which would sell sausages, wieners, frankfurters, etc., by number rather than by weight—which, of course, would eliminate much of the laborious weighing and inspection described above.

The cellophane overwrapper is a conventional machine of the latest high-speed type. Packages emerging from it are rolled by gravity conveyor into a large storage cooler just off the packaging room. From this point, a basic inventory stock will be maintained for distribution to retailers.

While the new sausage and pre-packaging plant is geared to supply enough of the packaged products to satisfy the demand of the entire retail market covered by the company, production will continue on a limited basis until actual sales results are tabulated, according to Mr. Hunter. Early indications are favorable.

CREDITS: *Package development and design, Jim Baker Associates, Inc., Milwaukee. Cellophane overwraps, Milprint, Inc., Milwaukee. Paperboard trays, Acme Folding Box Co., St. Louis. Wrapping machine, Package Machinery Co., East Longmeadow, Mass. Ham and bacon wraps, Daniels Mfg. Co., Rhinelander, Wis.*

PRE-PACKAGED DELICATESSEN ITEMS

In the current swing toward pre-packaging of food store perishable items previously not packaged or not sold, the possibilities in prepared delicatessen items should not be overlooked.

Many housewives whose busy schedules permit little time for preparing attractive desserts and salads have found an answer to their problem in the new line of packaged ready-to-serve salads and desserts produced and sold by Jewel Food Stores, Chicago. The molded gelatine desserts and salads are packed in 12- and 16-oz. waxed paper containers whose window lids afford ready inspection of the products. Visibility, a powerful sales stimulant, is an unusual feature in the delicatessen line.

Kept in the home refrigerator until ready for serving the molded desserts are quickly removed intact from the tapered containers after being held momentarily under the warm water tap.

Containers are securely closed with a cellophane window lid which locks into a groove a short distance below the rim of the cups. Printing is in combinations of red, green, blue and orange.

CREDITS: *Mono containers, Paper Division, Continental Can Co., Chicago.*

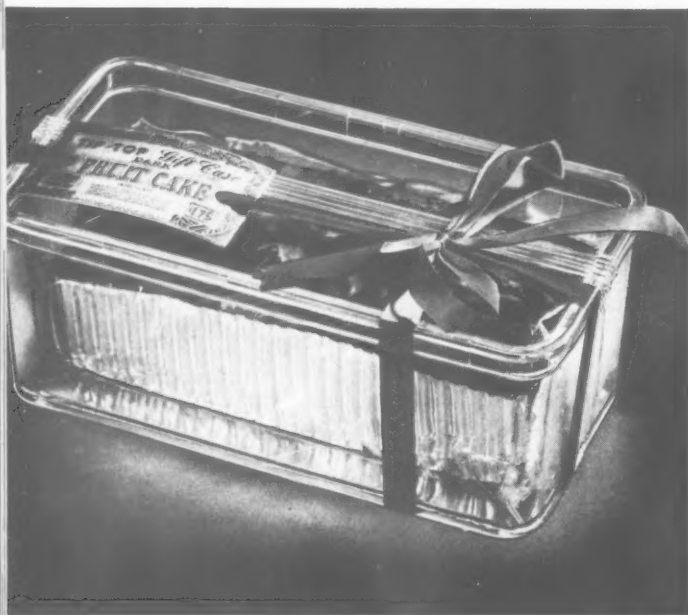


PAPER CUPS HAVE CELLOPHANE-WINDOW LIDS.



DESIGN

RE-USE PACKAGE IS PLASTIC REFRIGERATOR BOX



Transparent polystyrene, molded in two pieces—base and lid—has been selected by Ward Baking Co. as the Christmas gift box for its Tip-Top fruit cake. This plastic container has added value as a re-use refrigerator storage box. Pan liner for the cake is a lamination of aluminum foil and grease-resistant paper, which has eye-appealing brilliance combined with protective qualities. Foil surface of the liner is corrugated, while the inner lamination has a smooth surface. Resistance to grease and moisture offered by the white inner ply protects cake against drying out during long seasoning period. Cake and liner are overwrapped in cellophane. Ribbon tie and three-color printed aluminum foil label complete the gift case.

CREDITS: Box molded by Ruzak Industries, New York, of Dow Chemical Co. polystyrene. Pan liner, Sherman Paper Products Corp., Newton Upper Falls, Mass. Foil liner and label, Reynolds Metals Co., Richmond, Va.

PACKAGED ALLOY WIRE

Silver brazing alloy wire is not usually packaged, but sold from looped-up bulk in desired lengths. This is inconvenient and wasteful, too, when the expensive alloy has been sold in error for wire. All-State Welding Alloy Co., White Plains, N. Y., has devised a unique dispenser package for two grades of silver alloy. The dispenser is made of aluminum like a round telescope box with a recess in one half to hold a flux jar. The alloy wire is spring wound around an aluminum reel which fits into the recessed half of the box. Outer half of box fits over the assembly and wire is dispensed through a hole in the side. Dispenser may be held in the hand during brazing operation. The unit is conveniently packaged in a paper carton.

CREDITS: Aluminum dispenser, Donnelly, Blanthorn & Co., Inc., New York. Wire spring wound by Ace Spring Mfg. Co., New York. Carton, National Lithograph Window Advertising Co., New York.



HISTORIES

LONG-LIVED ZIPPER BAG OF PRINTED VINYL FILM

The Everhot automatic electric blanket made by Swartzbaugh Mfg. Co. is merchandised in a transparent cast vinyl chloride acetate film bag which keeps the blanket fresh and clean right up to the time of sale. The zipper opening gives added convenience and appeal. Toughness of vinyl enables the blanket to withstand handling in department stores and serve as a permanent container in the home. The bag maker claims to have solved the problem of printing on vinyl by developing a special printing machine using electronic techniques. Printing is confined to trade name, centered on the face of the bag. In permanent use, the name is kept constantly before the consumer. The developer of the bag also devised a device for placing the blanket in the bag. A similar bag is used for Orr "Sonata" blanket.

CREDITS: Bag, Clarvan Corp., Milwaukee, Wis., using Plasticoid vinyl film.



COLORFUL CARTON

Realistic full-color reproduction of the familiar spray of four red roses features this colorful gift carton for Four Roses whiskey in its own private-mold bottle—the first gift packaging to be used by Frankfort Distilleries since before the war. The carton is printed in seven colors on 0.026 coated paperboard. Dark green and gold form the background colors. The red roses centering the front panel appear against a light buff background. Designed for year-around use, the carton carries no special holiday decorations, but is planned for use as a gift package for anniversaries, birthdays and other special occasions. The company trademark is incorporated in the new private-mold bottle.

CREDITS: Design, Georges Wilmet, New York. Carton, The Lord Baltimore Press, Baltimore, Md., using Fidel-I-Tone printing process. Bottle, Owens-Illinois Glass Co., Toledo, Ohio. Label, The Lord Baltimore Press.



1. Although workmanship and coloring were excellent, design elements of this label from the Gay '90s era included everything but the kitchen sink. The label truly reflects the age of gaudy expositions and medals and of rococo exterior and interior decoration of the times.

CONTEMPORARY LABELS

Burnham & Morrill specimens show that can labels have always reflected the spirit of their time. by WILLIAM LONGYEAR*

When we look back at the canned-food labels of the middle and late 19th Century, we are amused by the ornate designs and frameworks, cluttered with medals and obscure characters; the quaint copy and lettering, the unappetizing colors. How in the world, we ask, could these be expected to sell food products?

What we fail to realize is that such labels as a rule were as modern *in their time* as the most streamlined,

* Head, Advertising & Package Design Dept., Pratt Institute, Brooklyn.

lacquered label of today. As used by progressive food packers, such labels always faithfully reflected the styles and manners of their day. To the lady in high-button shoes, they were probably the acme of appetizing eye appeal.

This thought struck me forcefully a short time ago when I had the privilege of looking through a venerable album containing hundreds of samples of the early labels of Burnham & Morrill, the aggressive Maine firm

Reproductions of the two old labels attached to this article are the result of remarkable ingenuity. They were originally produced by steel engraving and stone lithography and printed in six colors. Shooting directly from single specimens of the old labels taken from a Burnham & Morrill album, the Walker Engraving Corp., New York, made new plates from which these reproductions were printed by the modern four-color halftone process. Thanks to the talent of an old-time photo-engraver, the subtle coloring and character of the originals have been retained; even the exact tint of paper matches that of the original. For the privilege of examining these rare old labels, the reader is indebted not only to Walker Engraving, but to Burnham & Morrill, who supplied the tip-ons, and Muirson Label Co., who printed them especially for illustration of this article.

(now better known as "B & M") which was one of the first packers of canned foods in this country.

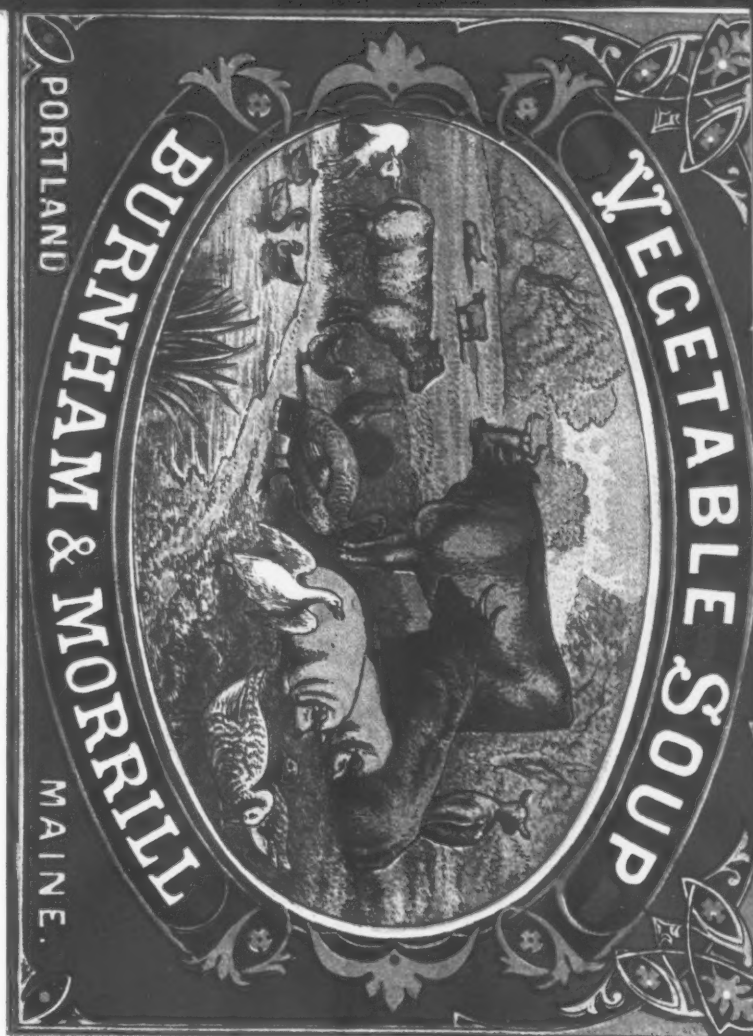
Just previously I had had occasion to go through some old Currier & Ives collections and early photographs in search of authentic American family scenes of the Victorian era. Now it was obvious to me that the Burnham & Morrill labels of the same era reflected exactly details of the architecture of the houses of the period, little conceits of fashion in dress and cherubic ornaments that were then considered the last word in sophistication in the parlor. With remarkable fidelity, they mirrored the whole way of life in that day.

On the following pages there are tipped-on samples of exact reproductions of two of the 19th Century Burnham & Morrill labels, as well as a sample of the newest B & M label. Underlying each of these specimens you will find contemporary photographs and illustrations from the periods they represent. I believe these examples will substantiate my point—that good labels are always contemporary, always up to date.

Here, actually, is a history of 19th Century America—told by can labels. Will today's packaging tell as much to historians 100 years from now? It should be instructive to all designers and users of packages to pursue that thought.

Burnham & Morrill is a particularly apt subject for this study. Not merely does it have a long

2. Reproduction of pre-Civil War label, at right, reflects peaceful, pastoral mode of life at that time. 3. New-fangled "tinned" foods enlivened family picnics, a principal diversion in that era.



DIRECTIONS.

This Soup is very strong, and should be reduced with one-and-a-half pints of water before serving. They are prepared with great care from the very best materials.

BURNHAM & MORRILL,
 PROPRIETORS OF THE CELEBRATED BRANDS OF
MACHIAS BAY LOBSTERS,
PORTLAND SWEET CORN,
SCARBORO' BEACH CLAMS.
 PACKERS OF ALL KINDS OF MEATS, SOUPS, FISH, AND VEGETABLES.

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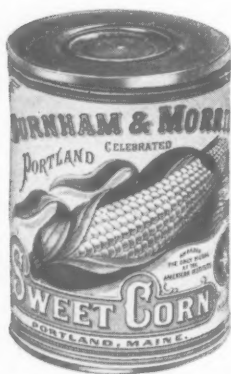
2. Reproduction of pre-Civil War label, at right, reflects peaceful, pastoral mode of life at that time. **3.** New-fangled "tinned" foods enlivened family picnics, a principal diversion in that era.

PHOTO COURTESY THE BETTMANN ARCHIVE.



history of progressive label-design modernizations; the history goes clear back to the origin of commercial food canning in this country.

It all began away back in 1838 when Isaac Winslow, whaler, native of Maine, while outfitting ships in Marseilles, met Nicholas Appert and brought his patents for hermetically sealed canisters from France to New England. There were long and discouraging experiments in canning corn and sea foods. Commercial canning as



4. Cap-and-hole can, hand-soldered, made its advent prior to 1920. This label is a steel engraving and lithograph in soft coloring.



5. Key can of the 1920s. At this time labels represented an all-time low in design, display value and in craftsmanship.

we know it today was born in New England and Burnham & Morrill were among the first, tracing their origin to Appert and Winslow.

As canning grew, there arose an increasing demand for labels. Printers in Philadelphia, New York and Boston were suddenly in the label business. The first package designers were the engravers and lithographers of the print shop. They were busily engaged in executing label designs on wood, steel and stone. Many were German trained, thorough craftsmen from the old country. Whatever we may think of their merchandising effectiveness today, one has only to look at these early B & M labels to be impressed with their simple, honest beauty. They were "the latest" in design, definitely up to date, keeping pace with the "modern" canning industry.

Page after page in the B & M album shows the work of 19th Century label designers and printers who produced forthright and beautiful labels from hand processes which today would seem primitive. Frequently these processes were overlapped, combined for a specific result. The printed label compared favorably with the "art prints" of the day. Many labels have the naïve charm of the prints of those picture reporters, Currier and Ives.

Labels of the middle 19th Century are pastoral in

feeling, reflecting the simple—mainly rural—life which carried over from Revolutionary days. The country's industrialization and sophistication were still to come. Labels of the pre-Civil War period are realistically drawn, their subjects mainly barnyard animals and fruits of the field. The same pictorial representation of placid beasts in pasture would serve for anything from soup to roasts. The same set of plates was frequently used with merely a change of surprinted copy.

Typical of this pastoral period in 19th-Century life is the vegetable-soup label attached as Fig. 2. The quaintly drawn barnyard group purposely represents nearly all the domestic animals and birds used for food, for the same scene was used on a variety of products, including "soup and bouilli" and potted sausage. The decorative elements around the illustration are found in the furniture and architecture of the period. The Food and Drug Administration being still unheard of, the labels carry no information as to weight or volume of contents or the ingredients. Engraved in steel, drawn on stone and reproduced in six colors, the whole label has vigor, yet is refined in detail and color. It was designed to appeal to those "moderns" who had courage to try canned foods—something daringly new.

These new-fangled foods, unless removed immediately from the opened can, had been known to poison



7. The 1930 label discloses progress toward modern design principles, but still has a cluttered, ineffective appearance by today's standards.

6. The "diaper" labels were once thought necessary to hide the rust that often disfigured the earlier types of tinplate.



people. Nevertheless, "tinned" foods were becoming popular for special occasions such as picnics and yachting parties, as indicated by the old print shown as Fig. 3. The labels on the cans surrounding this happy family of picnickers are of the same period of design.

I examined a quaint B & M roast-veal label of the same period, bold in design but mellow in soft shades of violet, pink and green—colors much in vogue at the time. A pretty calf gambols in a flower-filled pasture.

The little critter, the landscape and all details are realistically and faithfully drawn. The back panel carries three of the very latest recipes. One reads:

Veal Pie. Have a dish lined with paste. Put a layer of veal, then a layer of sausage meat, then a layer of veal again, then sausage meat. Repeat till the dish is full. Cover with paste and bake it brown. A cheap and good family pie.

Today's recipe writers might profit by this clear description which, without superlatives, is most convincing.

Gradually the housewife became more accustomed to finding canned foods on the store shelf. Then came the Civil War, which greatly accelerated the canning industry. Burnham & Morrill date considerable expansion to contracts received from the government for preserved foods for the "Boys in Blue."

The 1870s was an age of great fairs, local and international. Labeled canned goods were featured in competition. Medals and awards were granted for superiority of quality. Here were the first "packaging shows," which gave the packer and consumer alike an opportunity to see mass labeling in competition. Burnham & Morrill won their share of honors in Paris and London and proudly reproduced medals on their labels.

In the latter part of the century the labels began to take on the airs and sophistication of more "modern," traveled times. Honest country scenes gave way to the

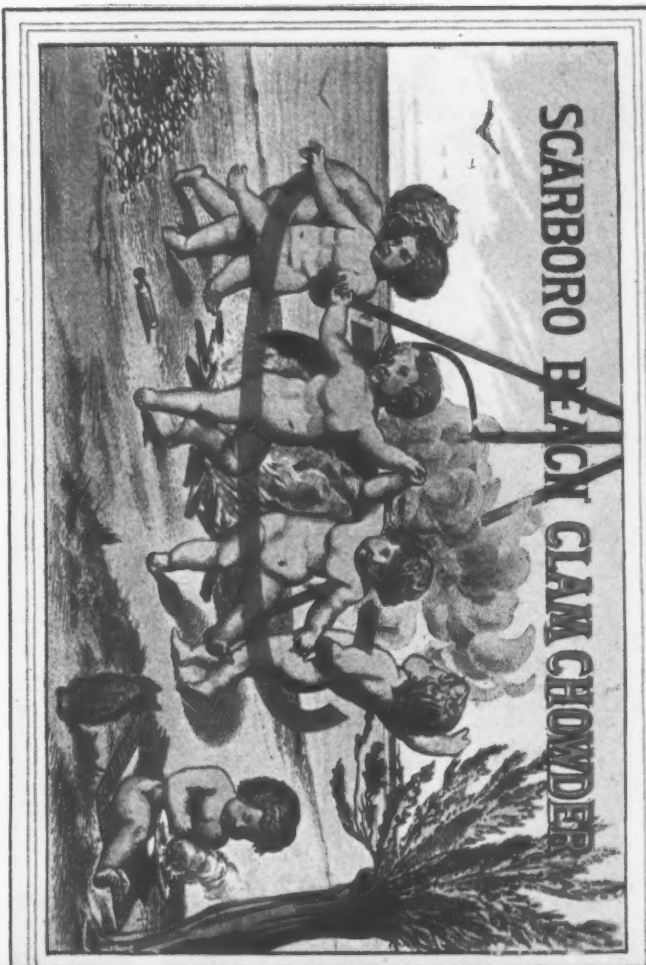
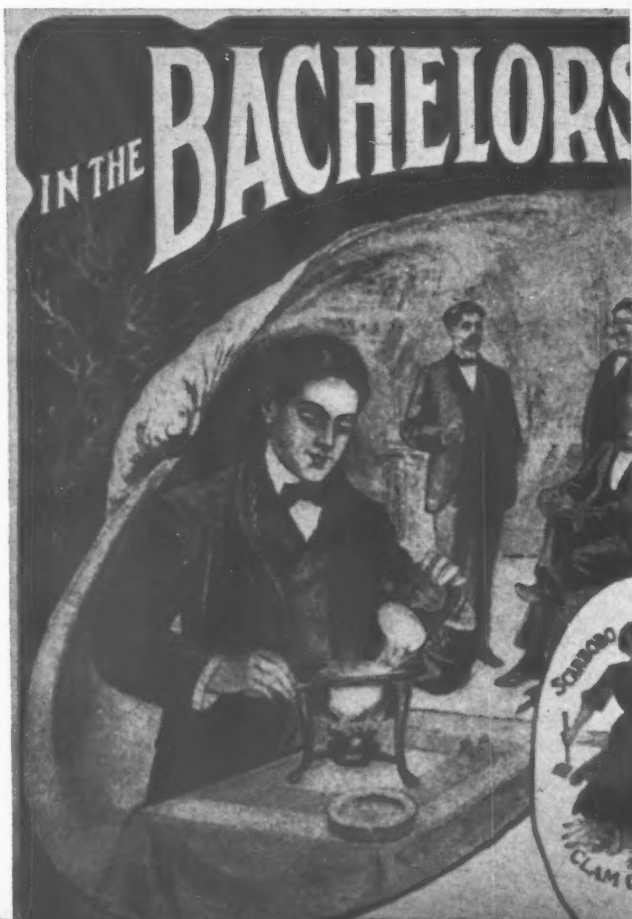
8. Specimen at right is from the '90s. Red ring around cherubs was an ineffectual effort to meet protests of the Purity League. 9. The ad reproduced below, for the same product, is from 1904 *Harper's*, showing supercilious living which the label design reflects.



DONALDSON BROTHERS FIVE POINTS, N. Y.

DIRECTIONS.

The contents of this can are ready for the table; to serve hot, place in boiling water twenty minutes before serving. The addition of milk is thought to be a great improvement. Place the contents of the can in a stewpan, add a pint of milk, with a few split crackers; serve hot.





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IN THE BACHELORS CHAFING DISH

A MOST APPETIZING

MAINE CHOWDER

The
SCARBORO BEACH
BRAND

surpasses all other chowders of the Atlantic Coast. Its delicious flavor is obtained by using only the small sand clams of Maine, a distinct variety of mollusk. This Chowder is highly nutritious—makes a delicious luncheon course or square meal. Used on Pullman Buffet Cars. Ready to serve by heating. Individual and family sizes.

Sold by finest trade. If your dealer cannot supply you, send us his name. Sample can, postpaid, on receipt of 10c.

Our beautiful Booklet, "A Maine Clam Chowder," sent free on request.

BURNHAM & MORRILL CO.
10 Franklin St., Portland, Me.



10. Here is today's B & M family—functionally designed, streamlined in dress, informatively labeled, realistically pictorial and colored for maximum display value.

foibles of the "Gay 90s," reflecting, as always, what at the moment was considered smart and up to date. Photomechanical processes in the 1880s eclipsed much of the hand work and labels of the late Victorian period became as cluttered as parlors and whatnots of the day.

The clam-chowder label attached as Fig. 8 is a perfect representative of this supercilious period. On one panel it illustrates the highly ornamented display of medals; on the other panel, the gay and frivolous spirit of the times is represented by the very naked little cherubs dancing in the beach around a steaming cauldron of clam chowder, while one of their number goes to work on a hot plate of chowder held in his bare lap.

Dated as it now seems, please note that this label represents two important steps toward modern merchandising practice: It is aggressive in presenting claims of quality for the product, through the reproduction of medals won; and in the cherub panel it links illustration directly to the specific product, suggesting that clam chowder is a happy and flavorful concoction.

The amusing story behind this label is also revelatory of the *mores* of the 1890s. The story has it that the Purity League of the time objected violently to the nakedness of the cherubs and forced the lithographer to overprint a circle of red in a not-too-successful effort at censorship. The reproduction as shown here is exactly as it appeared on B & M's clam chowder for years.

By 1904, when the ad reproduced in Fig. 9 appeared in *Harper's* magazine, the label had been changed somewhat, but the ad shows the type of gay blade who presumably was characteristic of the market for the product. It suggests ease of preparation "in the bachelor's chafing dish" and boasts proudly that the same brand is served on Pullmans—a hallmark of quality then.

The first quarter of the present century brought the doldrums to labeling, artistically speaking. True, there were gradual but not spectacular developments in the field. The hand-soldered cap-and-hole tin can (Fig. 4) of 1900 became the machine-made key can (Fig. 5) of 1920. The "diaper" label (Fig. 6) which completely covered the can, folding over top and bottom, came and went; this overwrap was designed to prevent metal contacting metal, as cases of canned goods were shipped 'round the Horn. Temperature changes in the holds of ships brought condensation and rust; the diaper label caught the moisture and separated metal from metal.

After the first World War, new materials and processes were introduced. Cellophane and plastics appeared hand in hand with direct color photography. These and other processes developed a packaging renaissance. The hand-stippled vignette on the can label gave way to the realism of the color photograph.

The age of functionalism began to dawn in the '30s. Unnecessary ornament and decoration were omitted from houses, furniture, kitchens. Plush, whatnots and medals were no longer popular in homes or on B & M labels, as evidenced by the pre-1940 label (Fig. 7).

The '40s brought clearer and more forceful label laws. The second World War saw rapid developments in the label industry. Better inks, varnishes and adhesives and better methods of labeling canned goods were born of extreme and unusual conditions. During this period Burnham & Morrill packed 250,000,000 cans of food for the Allies.

The newest Burnham & Morrill labels—as evidenced by the current family portrait (Fig. 10) and the sample tipped on as Fig. 11—are completely functional and attune to modern streamlined living. The improvement

started in the 1930s is now complete. Decorative gew-gaws, medals and seals have been eliminated in the interests of information; the informative panels meet all the requirements not only of law, but of consumer interest. Traditional type faces have been discarded in favor of sans serif, giving greater legibility. The direct-color picture of the product represents the latest advance in color reproduction of foods and is in line with the modern trend toward picturing the product as it appears ready to eat, rather than as it appears in the can. Even the dishes containing the product in these vignettes are of modern, streamlined design.

Thus today's labels reflect functionalism as the keynote of today's living—just as the Victorian labels reflect the preoccupation with rococo decoration in that era. Where will the next swing in design take us? That is hard to predict; but it is safe to say that Burnham & Morrill's labels of 1970—like those of all other alert food packers—will faithfully reflect the tastes and manners of their time.

CREDIT: Modern labels by Muirson Label Co., Inc., Brooklyn.

II. Tipped-on sample of current B & M label at right reflects (12, below) color and streamlined modernism of today's kitchen. It is as representative of its era as were Victorian labels of the coal-stove era (13, right).



SETTING COURTESY BROOKLYN UNION GAS CO.

B & M

MADE IN U.S.A.

SERVING SUGGESTIONS

REMOVE CONTENTS AND
HEAT IN SAUCE PAN.

TO SERVE AS MEAT PIE, PLACE

CONTENTS IN CASSEROLE

DISH, COVER WITH BAKING

POWDER BISCUIT, OR PAS-

TRY TOP CRUST AND BAKE

IN 400° OVEN FOR 30 MIN-

UTES, OR UNTIL TOP IS

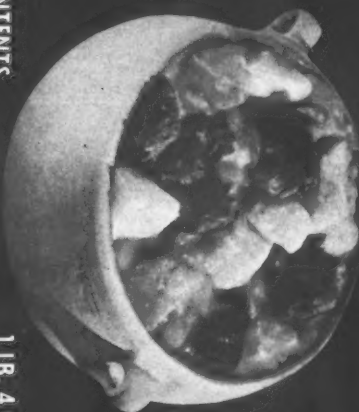
BROWN.

WRITE FOR "DOWN EAST RECIPES" --- FREE

B & M

MADE IN U.S.A.

Old Fashioned BEEF STEW



CONTENTS

1 LB. 4 OZ.

B & M

MADE IN U.S.A.

BEEF STEW

INGREDIENTS

WATER, BEEF, POTATOES, CARROTS,

FLOUR, ONIONS, SALT, CARMEL

COLORING, SPICES.

1 LB. 4 OZ. NET
(567 GRAMS)

PACKED BY

**BURNHAM & MORRILL
CO.**

PORTLAND, MAINE

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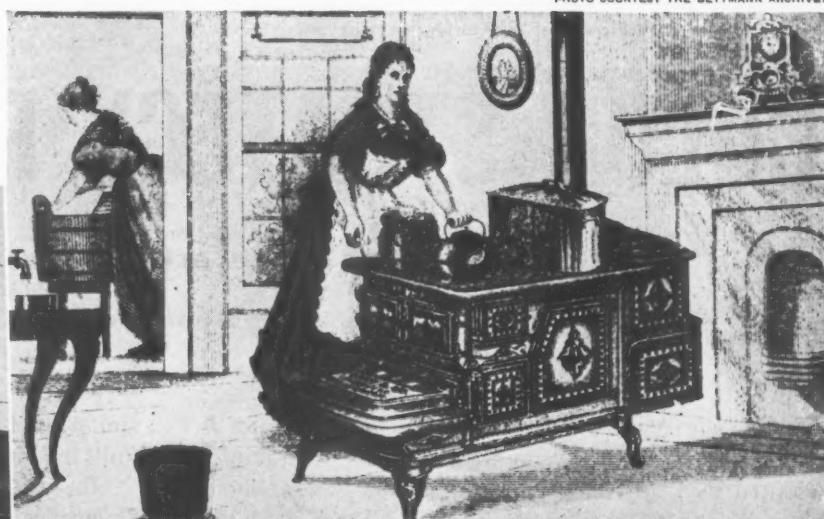


PHOTO COURTESY THE BETTMANN ARCHIVE.

Four floral designs — tiger lily, dogwood, white rose, rhododendron — appear twice in the line of eight brands. Each brand group, comprised of three-sized folding boxes, is distinguished by a different colored background. Medium-sized box is carry-home pack with handle.



COLOR STRATEGY FOR SHEETS

**Dan River Mills appeals to women shoppers with gala new floral boxes
and a convenient new carry-home pack with slip-out handle**

More proof that color sells on the sheet counter is the striking new floral-designed package family adopted by Dan River Mills to bring these household necessities more prominently into the view of shopping housewives.

Gone are the days when textile manufacturers could ship their domestic linens to stores in drab, solid-color packages. Today's packages must be gay, feminine and colorfully dramatic to achieve a place in mass display.

Dan River Mills not only presents a colorful new array of sheet packages for display in retail stores, but adds a new convenience in a carry-home package for sheets that can be kept and used for other purposes.

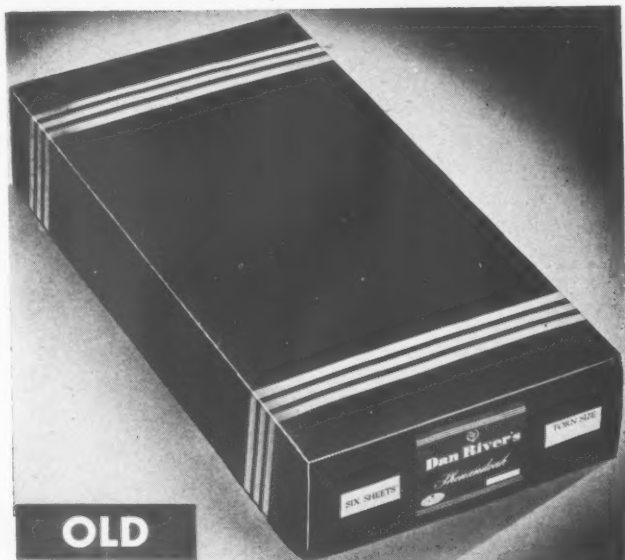
Dan River Mills claims to be one of the world's largest textile producers. For nearly 40 years, it has been a leading manufacturer of sheets, its production running to approximately 70 million square yards a year. In addition, the company makes dress goods, men's

summer suitings, sports fabrics and rainwear in its vast mills in Danville, Va.

More than a year ago, D. L. Reardon, manager of the Domestics Department, and L. H. Browder, advertising manager, decided to change the practice of packaging sheets and pillow cases in plain and conventional containers. Prior to the war, the Dan River products were packed in plain-colored blue and red boxes. There was no packing at all during the war or since. The sheets and pillow cases were shipped to the store merely wrapped in dozen units.

What was needed, it was decided, was a package line for sheets and pillow cases that was attractive enough to be displayed on top of counters.

For sheets and pillow cases, the new package family comprises four floral designs of dogwood, tiger lily, white rose and rhododendron. Each appears twice in the series of folding boxes for eight brands, each distinguished by a different pastel color. The eight colors are:



Dan River Mills' prewar boxes were blue and red; they had no eye appeal for display purposes.

pistachio, peach, French gray, aqua, topaz, azure blue, shell pink and chartreuse.

The folding boxes for each brand appear in three sizes, one for six sheets, one for two sheets and a third for a dozen pillow cases. The box for two sheets (15½ by 9½ by 2 in.) is the carry-home package. It is packed in the mill and has a slip-out handle at the top. When a shopper buys a pair of sheets, the clerk simply hands her the package and the shopper walks out, carrying the box unwrapped. In faint lettering which can be read only from a short distance appears the legend, "Sleep Beautifully on Dan River Sheets." The bottom end of the box carries the Dan River slogan, "It's a Dan River Sheet," and the brand name of the sheets.

A pre-sampling of shoppers showed that many women would keep the box and use it for other purposes once they got it home. For that reason, the lettering on the face of the package was made as inconspicuous as possible.

An auxiliary advantage of the package is that of time saving. Both store and customer are saved the time normally required to wrap the package.

In designing the boxes, the company also had in mind the plan of narrowing the area of sales competition between retail stores and between jobbers. Trade names are sold on an exclusive basis within a city or, in the case of large cities, within a trade area of the city. They are sold both direct to prime department stores and to jobbers. The retail outlets consist of approximately 200 of the country's largest department stores and there are 400 jobbers who sell to smaller retail stores.

The sheets and pillow cases in these packages come in two grades—luxury muslin and utility muslin—and are sold to department stores under the trade names of Debutante, Integrity, Bob White and Sapphire, each of them in a different-colored box. The brands sold to jobbers consist of Majestic, Dancraft, Shenandoah and

Navarre. Their packaging likewise is distinguished in individual colors.

The dogwood and white-rose designs were adopted for the luxury-muslin sheets and pillow cases, with the tiger lily and rhododendron appearing on the utility-muslin packages.

Competition is lessened in this fashion: if one department store purchases the Debutante and Integrity sheets and pillow cases, they come from the mill in pistachio and French-gray colored boxes. A rival store, which sells the Bob White and Sapphire labels, offers them in boxes of chartreuse and azure blue. The distinguishing colors, it has been discovered, serve as a merchandising aid for each store.

The new packaging line is tied in with the company's new trade character, "Buttons," a bright-eyed and impish soft doll, developed to appear in the company's national advertising. Public interest in Buttons has been so great that a New York toy manufacturer acquired the rights to sell it commercially and more than 30,000 were sold in the first six months.

CREDITS: Boxes, Robertson Paper Box Co., Montville, Conn.

The package for two sheets has a slip-out handle at the top. Clerk simply pulls the handle out, hands the package to customer ready to be carried home. There is no waiting for wrapping.



EXPORT PACK

A survey of foreign port conditions shows why U. S. shipments are getting a bad name and how packaging can be improved. By GORDON E. BOUTON*

The shipper, the insurance broker, the steamship line and the consignee are all equally interested in and concerned with whether or not the item prepared and intended for export shipment will arrive at its destination in sound condition. If this goal is achieved, there will be satisfaction and proper return to all connected with the transaction, from the manufacturer to the ultimate consumer.

It is with this goal in mind that the New York Branch of Eli Lilly & Co. has undertaken a survey of existing conditions which might impede the safe arrival of pharmaceuticals prepared for export shipment and made recommendations for whatever corrective steps may be necessary to eliminate those contributing factors over which it has control.

Realizing that the operational level is the most accurate source of information, it was decided that we would visit agencies directly or indirectly involved in the handling of export shipments of pharmaceuticals. In addition to the shipper (in this instance, other manufacturers of pharmaceuticals), the insurance broker, the carrier or steamship line and the consignee, it was believed expedient to contact those who had a knowledge of export-packing specifications, as well as the manufacturers of containers.

Each agency mentioned in the preceding paragraph was intensely interested in learning how export shipments might be improved so as to insure arrival at destination in proper condition. The shipper, insurance broker and carrier expressed deep concern over the losses being experienced in practically every shipment. All agreed that any improvement would be welcome and that immediate steps must be taken to help ourselves; otherwise, drastic packing specifications may be forthcoming which will prohibit carriers from accepting shipments not complying with specifications.

* New York Branch of Eli Lilly & Co., Indianapolis.



Stout wood crates used by Westrex Corp., Western Electric export subsidiary, are considered models of good packaging. Note construction and banding of crates, "U.S.A." insignia (red and blue), "fragile—handle with care" warning in language of destination and blind marking to conceal nature of contents from all except consignee. Even Western Electric name is abandoned in favor of less-revealing "Westrex" name. PHOTO COURTESY WESTREX CORP.

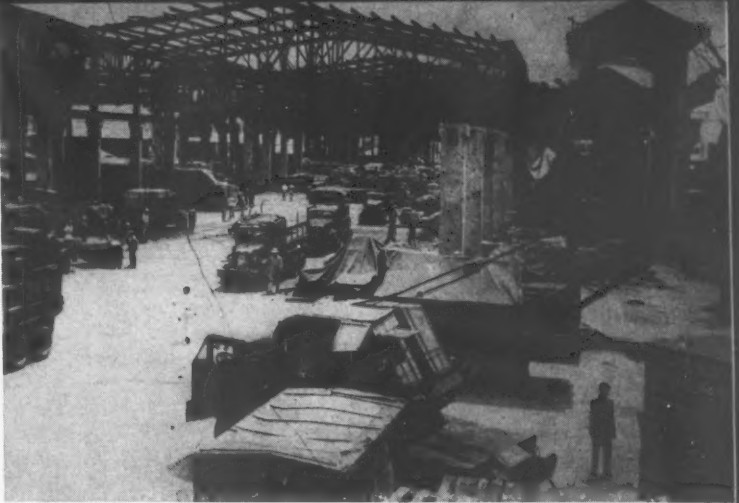
In considering the most logical carrier container for export shipments, it is well to know the existing conditions at the port where the cargo is to be received. Immediately following World War II, conditions affecting the well being of commercial cargoes were definitely abnormal in practically every port in the world. Unfortunately, there has been no marked improvement in these conditions, which have resulted from labor strife, congestion, inadequate equipment and insufficient storage space, in spite of the vigorous efforts of steamship companies, terminal operators and municipal authorities to attain normalcy in supervision, handling and storage. Conditions such as these represent an abnormal loss threat to almost every shipment.

The following data, which were developed through a variety of sources, are presented as a brief résumé of existing foreign-port conditions:

In Latin America many vessels lie two to three weeks before a discharge berth is obtained. The majority of of the cargo received is badly packed and fit only for domestic shipment. There is a great deal of pilferage. There is a manpower shortage as a result of strikes. The ports are congested, making proper checking difficult. Some storage space is in the open. Some car-



Typical condition in which domestic cartons are found on roofless foreign docks. All authorities in the U. S. agree domestic cartons should not be used for export shipments, regardless of the carrier or destination.



This view of the dock at Manila is typical of current conditions at hundreds of other bombed-out ports. Docks are congested, shipments open to weather conditions and to looting. PHOTOS COURTESY NORTH AMERICAN COMPANIES.

goes are trucked over winding, unsurfaced roads through mountainous country. Cargo is handled by lighter where ships cannot dock. Sea spray soaks cargo in open storage or on a lighter, causing corrugated containers to fall apart.

With respect to *Europe*, the combat-area ports offer the greatest challenge to proper and secure packing, due to the lack of many facilities. The ready access to black markets invites pilferage. There is often an absence of required documents.

In the *Middle East* cargoes are lightered ashore and shed storage is provided. Again, there is much pilferage. Rail transport facilities are insufficient to move goods to the interior. Seaports are badly congested. Warehouses are full and there is a shortage of tarpaulins for protection of goods stored in the open. Underwriters have discontinued all risk coverage on shipments destined for Iran.

In considering *African* shipments, the Canary and Cape Verde Islands are taken into account. In this area cargoes are discharged on open wharves having no cargo-handling equipment or warehouses. There has been much pilferage and breakage where cartons are used. Principal ports of South Africa are in good condition, but increased import volume is overtaxing rail facilities to inland destinations. Much pilferage has been experienced in this locality when cartons are utilized.

In the ports of the *Far East* there is poor supervision and a lack of handling facilities. There is excess pilferage, attributed to the packing of goods in cartons, plywood and light lumber. European shipments are reported arriving uniformly better packed than American shipments. The V-2 cartons are turning out well. The theft and pilferage situation is quite serious where goods are lightered ashore, due to poor handling and supervision. Labor trouble is tied in with the political situation.

In the *Pacific*, storage space is generally good. Most piers are regularly patrolled by watchmen. There is,



The "cooper's pile" in Manila Terminal Warehouse. While salvaged merchandise (on truck) bears the manufacturer's label, it is impossible to tell to whom it was consigned, due to failure of shipping cases. Note refuse pile at right.

however, widespread looting and pilferage which is cleverly concealed.

With circumstances such as these, it is imperative that exporters take cognizance of their own obligations. These obligations entail the providing of the most durable packing obtainable and economically practicable. The use of domestic packing for export shipments continues to contribute substantially to losses of every description.

The shipper's practices

In considering the shipper, we again concerned ourselves only with other manufacturers of pharmaceuticals or like products. It was noted that a great variance existed in the type of container used for similar prod-



Note cautionary markings on these Westrex export cases in both English and foreign languages. Taking a leaf from Britain's book ("Britain Delivers the Goods"), this company is setting a good example for American manufacturers by its flag insignia. PHOTO COURTESY WESTREX CORP.

ucts. Even within the confines of individual shippers this practice existed. Some complained of great loss by damage or pilferage, while others reported very little loss. In each instance, the type of container used was discussed; the cost of the container in relation to the insurance rates applying to that particular container; the inconvenience, cost and loss of good will through non-receipt of items and all the other factors which might suggest false economy.

One corporation stated that it had been using domestic corrugated cartons for all Latin American and some European and Middle Eastern shipments and had been experiencing many losses. When it was suggested that existing port conditions, sea spray, etc., might be contributing to the non-stability of the carton, those responsible for exports stated that they had been aware of the inefficiency of that particular carrier carton and, although tolerating it for some time, they would now take steps to improve it. They will try solid fibre or other substantial protection to determine what is best for their purposes.

The same corporation, although utilizing wood cases for Far Eastern shipments, had been using descriptive markings on the cases which might be a factor in pilfering or theft losses from that area. Steps are now being taken to eliminate this practice.

Another manufacturer is using domestic corrugated cartons in shipments to Latin America. All of the cartons are paper-gum taped, some with and some without metal-band strapping. This shipper is experi-

CAUTIONARY MARKINGS FOR EXPORT CASES

ENGLISH	FRENCH	GERMAN	ITALIAN	SPANISH	PORTUGUESE	SCANDINAVIAN
Handle With Care	Attention	Vorsicht	Attenzione	Manejese Con Cuidado	Tratar Com Cuidado	Aktas
Glass	Fragile	Glas	Vetro	Vidrio	Vidro	Glas
Use No Hooks	Manier Sans Crampons	Ohne Haken handhaben	Manipolare senza graffi	No Se Usan Ganchos	Nao Empregue Ganchos	Begana Inga Kroh
This Side Up	Cette Face En Haut	Diese Seite oben	Questo lato su	Este Lado Arriba	Este Lado Para Encima	Dena Side Op
Fragile	Fragile	Zerbrechlich	Fragile	Frágil	Fragil	Mycket Om Talight
Keep in Cool Place	Garder En Lieu Frais	Kuehl aufbewahren	Conservare in luogo fresco	Manténgase En Lugar Fresco	Deve: Ser Guardado Em Lugar Fresco	Forvaras A Svalt Stalle
Keep Dry	Proteger Contre Humidite	Vor Naesse schuetzen	Preservare dall umidità	Manténgase Seco	Nao Deve Ser Molhado	Aktas For Vaten
Open Here	Ouvrir Ici	Hier öffnen	Aprire da questa parte	Abrase Aquí	Abrir Por Este Ponto	Oppas Har

encing many complaints concerning items shipped in cartons. When a customer requests shipment via wood case, the same manufacturer honors the request and has noticed few complaints. While wood cases are used for shipments other than those going to Latin America, some are wire strapped and others are metal-band strapped. Item description is not used on any shipment and, except for the expense, wood cases are favored.

The final manufacturer cited as an example is using wood cases with stapled-wire strapping for all export shipments containing bottled goods, regardless of destination. In spite of this type of carrier case, the shipper has been experiencing some losses. It is believed that the cause of the losses is that all space within the carrier case is not properly utilized.

These reports were typical of all shippers contacted—numerous ways of packing, common loss experiences and a desire and hope that some standardization of specifications might be reached whereby losses would decrease and satisfaction increase.

The insurance broker's interest

The insurance broker was contacted because he is vitally concerned with whether or not insured cargo arrives in proper condition. Shippers, in return, should be vitally concerned with the insurance broker, his ideas and suggestions. The safe arrival of merchandise, the type of container used, etc., have a definite bearing on over-all insurance rates. To ignore ideas and recommendations from this source is to encourage false economy.

The insurance broker reports that conditions affecting the well being of commercial cargoes are not improving at all. To offset these conditions, shippers are afforded much information secured by the broker through surveys, tests, conferences and the like which, if given serious consideration, may make for the desired results. Of course, the statistics available from the broker substantiate his claim that containers for export shipping must of necessity have sufficient strength, proper packing and logical markings to assure safe delivery.

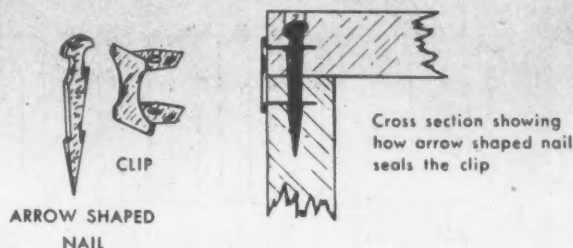
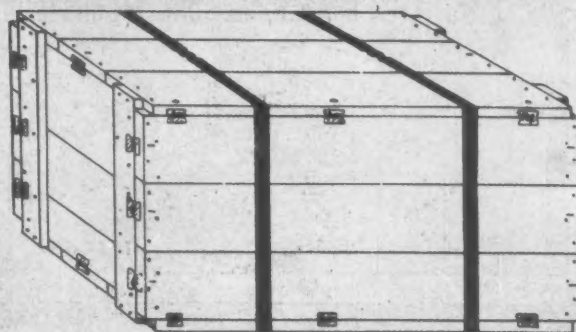
Accompanying diagrams taken from the booklet, "Loss Prevention Recommendations for Export Shipments," prepared by the Marine Service Department, Insurance Company of North America, illustrate some suggestions and specifications to help assure safe delivery of cargoes.

The carrier's viewpoint

The carrier and shipper are equally interested in and concerned with having the cargo arrive in proper condition. The carrier companies employ large numbers of people and maintain huge claims departments in order to satisfy complaints resulting from damage, theft and pilferage.

Several steamship lines were visited and the loading of a ship was observed to learn how export shipments are actually handled. Like the insurance broker, the carrier is vitally concerned with the type of carrier car-

EXPORT OR IMPORT CASE PROTECTED WITH PILFER-PROOF CLIPS



Clip is driven with hammer into end or side of each board so that clip bridges over the joint. Arrow-shaped nail is then driven so that point will pass through holes in clip and seal clip in wood; barbs on nail prevent its being withdrawn without showing evidence of tampering. Consignees can be instructed to refuse clean receipt for cases on which clips have been tampered with.

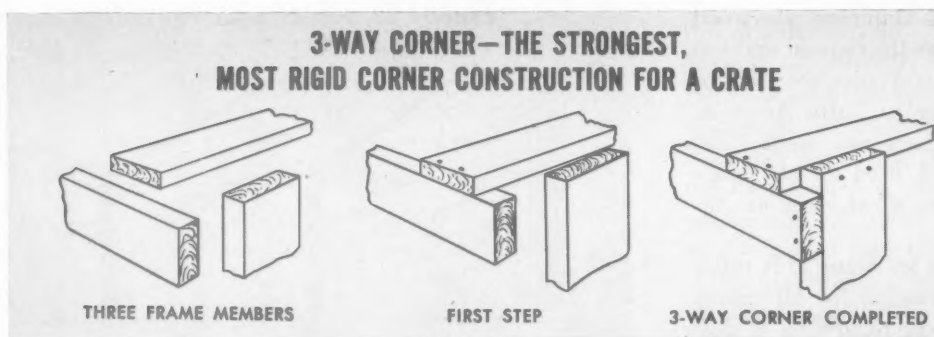
ton. On this depends his ability to handle the shipment under the wide and varied conditions experienced by all steamship lines and to feel some assurance that it will withstand such handling.

Our attention was directed to the fact that it is necessary in some ports, whether in Latin America or in the Far East, to lighter cargoes ashore where it is impossible for ships to dock. In many instances the lighter may be washed by waves, soaking the cargo. In other instances the cargo may be stored on an open dock and subjected to sea breezes. In either instance it has been found that when cartons of domestic nature are used, the carton crumples and falls apart after drying. In the further transporting of the cargo, the merchandise is damaged by breaking or is pilfered. It is also well to remember that the holds of most ships sweat. Such dampness also has a deteriorating effect on corrugated cartons of lighter construction.

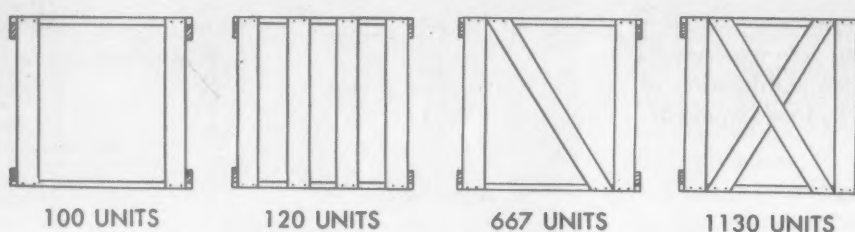
While visiting the pier, many discrepancies were noted in what might be termed the use of common sense in preparing shipments for export.

Many of the cartons which were seen at the pier were crumpling, gummed tape was coming off, metal strapping was loose or off at one end, shipments were marked to indicate valuable content, laminated and nailed-wood boxes were sagging or broken, re-used cartons of

3-WAY CORNER—THE STRONGEST, MOST RIGID CORNER CONSTRUCTION FOR A CRATE



RELATIVE STRENGTH UNDER DIAGONAL COMPRESSION



ALL CHARTS AND DIAGRAMS COURTESY INSURANCE CO. OF N. AMERICA.

improper size to hold present contents were utilized and many other flagrant violations of good packing principles were in evidence. If such conditions prevail before loading, what can we hope for at the receiving port?

An item of interest is the fact that many ships are now loading palletized shipments. Most piers are equipped to handle any type of cargo. The cause of shipping damage at this point does not lie in the handling, but rather in the manner of preparing the shipments for handling.

Before the shipment reaches the carrier it must be determined whether the nature of the goods is such as to require bottom stowage and thus sustain great weight, or whether it will require top stowage. It is necessary to consider facilities available at ports of lading and discharge. It is well to remember that normal stowage in a ship is often double the tiering given the cargo on a dock or truck. These are all important factors in determining the type of carrier container for export shipment.

Government experience

It was felt that since the army and navy had handled the greatest volume of shipments in the history of the world during World War II, this should be a good source of information covering specifications. It is realized that the demands of the government may be more exacting than those of private enterprise, but nevertheless their specifications are recognized as rigid and all inclusive.

It was interesting to note that those responsible for packing details and procedures in those government agencies expressed great enthusiasm and a desire to assist us when they were informed that we were endeavoring to improve our present methods of packing.

It was suggested that all packing details be reviewed by pharmaceutical manufacturers from the unit package, to the intermediate packing and protection, through to the final carrier container. Unit packing and uniformity were stressed. By this was meant that we should encourage all consignees to buy in unit lots; that sales in so far as possible should be stressed and sought after in unit lots. Reference is made to typical units such as a carton of five bottles of a certain product, the four- or twelve-bottle unit, etc. Then there should be a specific number of these units in the intermediate carton or packing and, finally, the carrier carton

should be so designed as to accommodate a certain number of units with no space whatsoever left in the carrier carton which might permit even slight movement of the contents.

It was suggested that greater care be taken in the type of separator used in a unit package. Twelve pints of a liquid substance to a carton was cited as an example. It has been found that separators customarily used in such a package have been used over a long period of time without respect to their test strength.

The idea of a good-test, solid fibreboard was discussed and although these agencies think it very good and far superior to domestic fibreboard, they would prefer to have it utilized by commercial establishments and to have either laminated or nailed wood cases used for all government shipments, including domestic as well as export. We were informed that the government is experiencing a great volume of damaged shipments, a major part of which involves l.c.l. lots.

The expense of using wood carrier cases for all government shipments was projected and it was the belief of the government agencies that, due to their methods of procurement, handling and storage, they would experience fewer breakages and less general loss and confusion should the wood carrier be used.

This source, as in the case of others contacted, suggested that particular attention be given to the type of carton utilized within the carrier case. It is again emphasized that the loss potential is ever present if the carton carrying the contents is not of sufficient strength to keep the carrier carton from collapsing.

Our attention was directed to metal-edge boxes, which offer great resistance to collapse. This type of box is being used extensively not only for shipment purposes, but also as a display package.

As was experienced in all other contacts made, those who understood the construction and type of container in use showed great interest in the desire which manufacturers have to develop or assist in developing specifications and standards which will assure better receipt of export shipments at their destinations.

It was generally conceded that wood carrier cases gave the best assurance that export shipments would arrive in the best condition. The carton manufacturers also pointed out that the strength and durability of the internal carton played a large part and were responsible for the resistance of the wood case to breakage or collapse.

Realizing the expense involved in the utilization of wood cases, container manufacturers are striving to produce a less-expensive container which will still afford adequate protection.

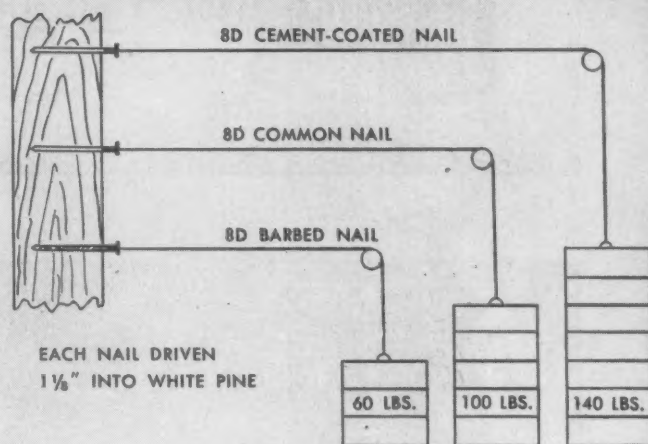
It is believed that solid fibreboard will come into use more and more, both for domestic and export shipments, when the source of virgin kraft, an essential ingredient, becomes more plentiful. When considering the use of the various types of solid fibreboard, especially for export shipments, both dry- and wet-test results should be scrutinized. It is often found that solid fibreboard will have a high dry test, but will break down to a very low test when wet. Others showing only a medium dry test will retain much of their resistance when wet. In the near future it is believed that the new VU board will be generally available on the market. It will offer higher dry and wet tests than the V-2 and will be less expensive.

Other tests are being conducted with telescoped fibre boxes. These would provide a greater number of layers of fibreboard and, consequently, greater protection. Consideration is being given to combination solid-fibreboard and wood cartons, which would offer greater rigidity and retain cushioning features.

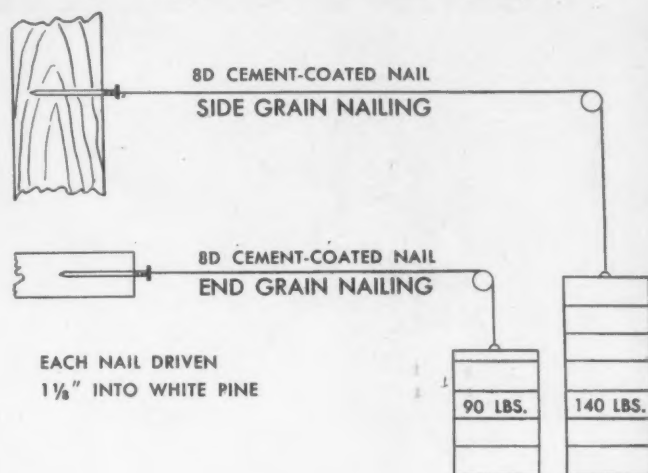
It is felt by the container manufacturers that solid fibreboard will do anything that any other container or carrier case will do and that, when sufficient materials are available to manufacture the cartons, the proof will be in the results obtained.

We are aware of the shortage of materials to manufacture new types of containers, of the scarcity and greenness of lumber for crates and boxes and of the various other associated obstacles, but it is to be noted that shipments originating in England, the European continent and other countries experiencing generally greater postwar difficulties than America, do not depart from the essentials of good packing. The British very proudly devote a little space on many export packages to declare, "Britain delivers the goods." We, as Americans, can also deliver the goods provided that, as shippers, we cooperate by packing and marking (Continued on page 204)

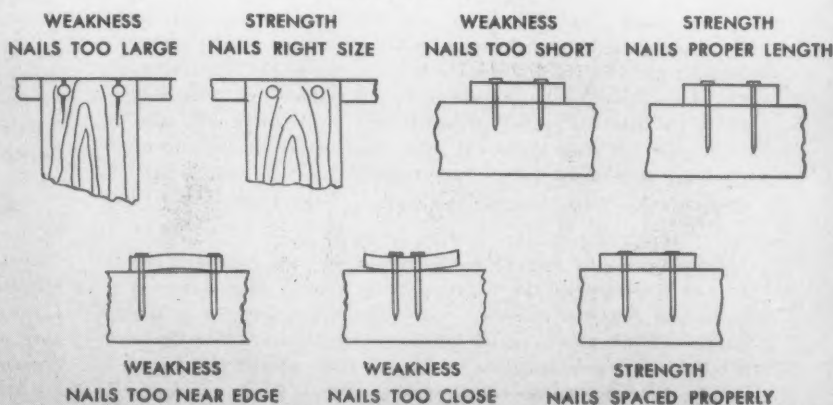
COMPARATIVE HOLDING POWER OF CEMENT-COATED, COMMON, & BARBED NAILS



COMPARATIVE HOLDING POWER OF NAILS DRIVEN IN SIDE GRAIN & END GRAIN



SOME TIPS ON NAILING





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2



3



4



5



MODERN

Package modernization without loss of recognition value has been achieved by the newly designed metal can for Gre-Solvent, a grease solvent made by The Utility Co., Inc., New York. Front and back panels are identical, with instructions and promotional copy on each side. Designed with a view to display in self-service markets, package needs only a quarter turn either way to "front" trademark. Can, American Can Co., New York.

Designed to appeal to baby as well as mother, the new wrappers for Clapp's baby cereal and oatmeal packages feature nursery animals and represent a departure from the type of labels generally used for these products. Seven animals romp playfully about the front and back of this three-color printed wrap. When contents are finished, the package serves as a toy for baby. Design, Georges Wilmet, New York.

Said to be one of the largest folding boxes ever to be glued automatically is this four-color printed paper-board carton for the Milenia blanket. Realistic color reproduction of the blanket is centered on the top panel. Blue background with floral design and minimum use of copy encourages utilization of box in the home as a storage container. Carton, Associated Folding Box Co., Boston.

To promote triple sales and simplify stock keeping for the retailer, Dupli-Color Products Co. has introduced its Triple-Pac container holding three bottles of touch-up and refinish coloring for use on cars and in the household. The three bottles fit into a folding carton. Bottles, Owens-Illinois Glass Co., Toledo. Carton, Morris Paper Mills, Chicago, Ill.

Newly designed clay-coated cartons, lithographed in four colors, for two new products of The Quaker Oats Co.—Oatmeal Cookie Ready Mix and Corn Muffin Ready Mix—achieve a family relationship with other Aunt Jemima products through the trademark, uniform display of product name and the "Add water—that's all!" slogan. Back panel carries illustrated instructions, while a white cartouche on top is provided for price marking. Design, Jim Nash, New York. Cartons, American Coating Mills, Inc., Elkhart, Ind.

Five-color rotogravure printing on cellophane distinguishes the new wrap for the Flav-R-Pac line of frozen fruits and vegetables packed by North Pacific Canners & Packers, Inc., Portland, Ore. The package for peas illustrated shows how a natural-color pictorial of product is used against yellow background. Wraps, Milprint, Inc., Milwaukee, and Dobeckmun Co., Cleveland.

Colorful rotogravure designs imposed on a 0.00035 aluminum foil, glue mounted to a 13-lb. sulphate paper, forms sparkling wraps for whiskies marketed by Brown & Forman Distillers of Louisville, Ky. Colorful three- and four-color printing makes an eye-appealing gift wrap because of its dead folding factor and ability to withstand marketing abuse. Easily applied by hand, the wrap is readily removed when gift use is not appropriate. Wraps, Milprint, Inc., Milwaukee.

A feminine touch is given to this gold, white and red set-up box for "Fashion Razor," a ladies' razor by Eversharp Schick. A die-cut tray covered with red-flocked paper for holding razor is fitted in base of box. When tray is lifted by front tab, blades and brush are revealed in another die-cut, gold-covered tray. Box, Samuel Barnett Co., Philadelphia. Cover paper, Matthias Paper Corp., Philadelphia.

The Ansco Panda camera is being packaged in a newly designed folding carton featuring on its side panels a line drawing of a panda lying in repose against a tree,

being photographed. Front panel carries a line drawing of the camera, while the top has a 2½-in. square patch containing the information that the camera "takes 12 pictures this size." Design, Henry Dreyfuss, New York. Carton, Lowman Folding Box Co., Syracuse, N.Y.

New package for Gypsy Fire Colored Flames for coloring the hearth fire is this No. 5 paraffin-coated tub with a tab-opening lid sealed in place with paraffin wax, for the 3½-lb. size. The small-sized container displays a new label resembling a birch log, with circular end labels in a ringed-log design placed against the red lid which conveys the effect of the log's inner bark. Tub, Lily-Tulip Cup Corp., New York. Label, Regal Art Press, Troy, N. Y.



PACKAGING PAGEANT



A folding paperboard carton that forms a dispenser package which may be hung up on the bath-room wall has been adopted by Schratz Products, Detroit, for "Bubbling Bath Handees." The product, enclosed in individual paper envelopes, is dispensed through a die-cut opening in the lower front panel. Tab for hanging is formed by folding over a die-cut section cut in the carton blank. Carton, Eastern Box Co., Detroit. Envelopes, Cupples-Hesse Corp., St. Louis.

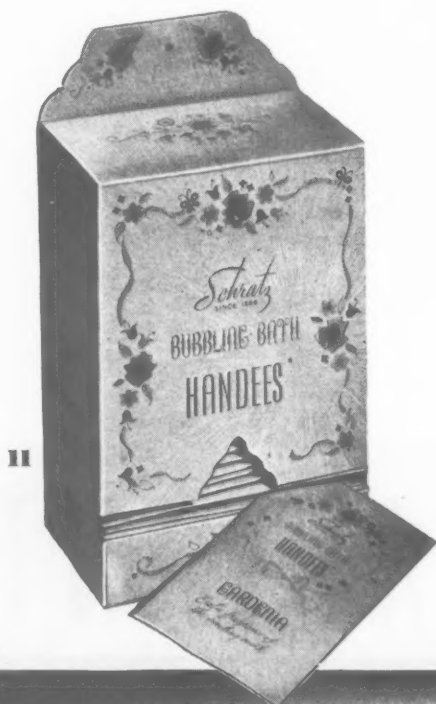
Taylor-Reed Corp. has introduced Q-T cake frostings packaged in eye appealing paperboard cartons easily identifiable as members of the Q-T family of prepared food products. The Q-T trademark appears in the same bold lettering in the upper left corner. Center

section of the front panel carries a patch indicating in reverse lettering the product and flavor. Directly underneath appear directions for preparing the product. Cartons, Container Corp. of America, Chicago.

The "Mr. Top Hat" package for mints made by Sweettooth Corp., New York, utilizes a cellophane bag printed with the high-hat face, topped by a printed paperboard hat that clips over the top of the bag to complete the design. This eye-catching package is said to stand out sharply when displayed on retail counters as an impulse-sales item. Bag, Cello-Masters, Inc., New York. Cellophane, Sylvania Division, American Viscose Corp., New York. Design, William Swyers, Floral Park, Long Island, N. Y.

By pulling the paper tab, a strip of cellulose tape which joins the paper tag and cellophane bottom of this package for James H. Rhodes & Co.'s Cosmetic Puff make-up sponge separates the cellophane section, releasing it for use as a cosmetic bag for carrying the sponge in a purse. The duplex cellophane bag is comprised of two sheets, the inner one bright red and the outer one transparent. View of the product in its natural color is enabled by placing the sponge next to the outer transparent ply. Cellophane bag, Transilwrap Co., Chicago. Paper tag, A. M. Steigerwald Co., Chicago.

The use of two drawn cellulose acetate inner trays in this set-up box eliminates the need of additional packing for export shipment of International Silver's sterling-silver brush and comb set. Acetate is sulphur



12



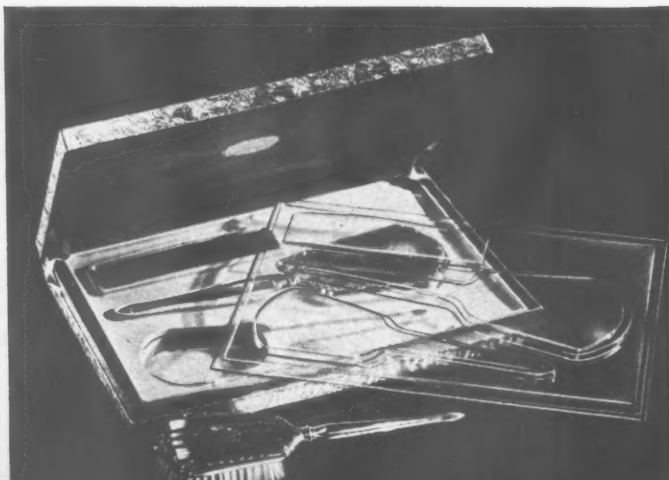
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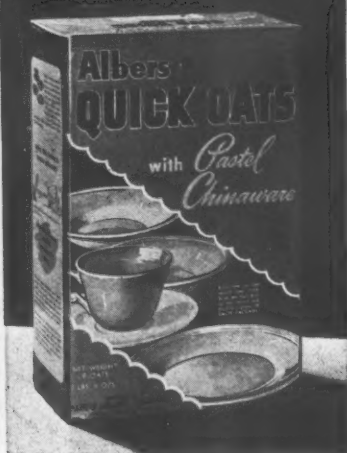


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PACKAGING PAGEANT

free and retards moisture transmission sufficiently to eliminate the danger of pitting and tarnishing from sea air. Box covering is embossed foil. The package is useful for retail display, since the transparent top tray permits a view of the products fitted into recesses in the opaque acetate tray below. Box, Somerville, Ltd., London, Canada. Acetate, Monsanto (Canada) Ltd. and Canadian Celanese Co., both of Toronto.

Multiple sales of its Lucy Ellen chocolate almond bars is being promoted by Community Industries Assn. of Sullivan, Ill., by this new take-home package containing 12 of the foil-wrapped units. Printed in yellow, brown and white, the folding carton doubles as a counter dispenser and reminds the customer to "buy the handy 12 pack for parties, picnics and bedtime snacks." Wraps are printed in gold, brown, white and silver, overprinted with gold. Wrap, Reynolds Metals Co., Richmond, Va. Carton, Imperial Box Co., Division of Morris Paper Mills, Chicago.

A new package design to promote its premium offer of pastel chinaware has been adopted by Albers Milling Co., Seattle, for its Quick Oats. A diagonal panel across face of carton wrap illustrates the chinaware items—cup and saucer, cereal bowl, fruit dish and bread and butter plate—one of which is enclosed with each package. Wrap, Will County Printing Co., Lockport, Ill.

A collapsible metal tube with plastic closure is used by the teRiff Co. of Los Angeles for packaging its new Creme Nail Polish Remover, with a folding paper-board carton as the outer package, both colored magenta and white. Product may be dispensed in measured amounts without spilling or leakage. Trade name, featured in reverse printing against a dab of color, is used as part of slogan, "It's teRiff." Design, Ad Art Service, Los Angeles. Tube and carton, New England Collapsible Tube Co., Chicago.

Entirely new in design is this package with die-punched flap in the top for displaying The Cudahy Packing Co.'s quick-frozen frying chicken. Dealers can lift the flap to reveal through the cellophane window the chicken inside. Copy is printed in red and reverse white, while Cudahy name appears on top and all side panels in white on blue. Carton, Waldorf Paper Products Co., St. Paul, Minn. Cellophane, DuPont.

Overwrap for Wortz Ten-Der-Rist crackers is made of 0.00035 foil, glue mounted to 18-lb. sulphate and thermoplastic coated on two sides for heat sealing. The wrap affords protection against moisture as well as eye appeal with its red background and blue lettering. Wrap, Milprint, Inc., Milwaukee. Foil, Aluminum Co. of America, Pittsburgh.

SOHIO

Frankly, we have not sensationalized the introduction of these packages by any campaign within our company or toward our dealers. We have felt that the improved packages would find their own mark and there is no doubt about it that they have. Furthermore, there is no doubt in our minds that they have contributed to an increased acceptance, particularly of our two specially packaged branded motor oils, among our dealers."

These comments by John Wieland, advertising manager of The Standard Oil Co. of Ohio, sum up the company's attitude toward the comprehensive re-packaging program now being carried out by this large marketer of petroleum products. Entrusted to a prominent industrial-design organization and set up on a long-term basis, the program is now beginning to bear fruit in the form of actual packages reaching the market. Outlines of the complete activity are substantially established, although it will be some time before the full changeover program is consummated.

The Sohio packaging redesign, according to Mr. Wieland, is "a logical part of a periodic re-examination of all fixed merchandising programs." Through the years, as is the case with many growing organizations, the company's line of packages has been expanded to meet the requirements of specific products and merchandising programs. The present effort is intended to integrate Sohio packages and adapt them more adequately to modern selling tactics.

Sohio, which markets its line of products principally in the state of Ohio, has an extensive line of automotive lubricants and is also merchandising a group of spe-

Designer recommended white background for the biggest selling motor oil on the theory that gas-station attendants would be more apt to keep a white container clean. Clean-cut display appearance results from use of red and blue trademark and lettering against plain white. Trademark oval for this product is given distinctive "tear-drop" shape symbolic of a drop of oil.

For new HQ (highest quality) oil, color scheme is reversed and bright red background is used. This reverse treatment provides flexibility, yet preserves family resemblance and recognition value. Stencil-type lettering for product name is used on these lithographed containers throughout line.

Poster-style treatment of HQ label is ideal for this 24-sheet introductory billboard poster.

" - Stands for
**Highest
Quality**"



REDESIGNS

Standard Oil of Ohio introduces first examples of package improvement program for both motorists' and household items

cialized household items, including a dry cleaner, fly spray, household oil and lighter fluid. The repackaging program will eventually encompass both lines, although at present the dry cleaner is the only household product available in the new-style package. A related activity also in progress at this time covers redesign of the Sohio station identification signs.

In launching this repackaging program, Sohio did not set up a special package-designing department or committee. Instead, as mentioned previously, details of the program were referred to an outside design organization. The activity has been "spark plugged" by the Sohio advertising department, with the full support and cooperation of the merchandising and sales departments.

The company recognizes that this redesign program, over and above its practical aspects, has exerted a "morale building" influence within the organization whose full value could never be weighed in dollars and cents. "What we wanted to accomplish more than anything else," states Mr. Wieland, "was a feeling of package awareness and appearance wherever in the company this was desirable. As a result, some of our other departments have asked for redesign, for instance, of cartons, which are handled through our manufacturing department, and even new design for our aircraft products.

"Today it is not uncommon for one department or another that is dealing with a new project to come to us and say, 'How about calling in the designer on this?'

We believe that this is a valuable accomplishment, to wit: to make all of us aware of this strictly intangible but important manner of meeting the public on most favorable terms, without anyone feeling that this is a 'job for George to do.' "

Although the new Sohio packaging program is flexible, permitting variations when required for particular products, it adheres in the main to several basic features which give it character and a desirable degree of uniformity. Most of the lithographed oil and grease containers employ a white background for the red, blue

Example of a blank-panel container filled and labeled. Careful stenciling with proper inks makes this almost indistinguishable from a completely factory-labeled can. The back panel is so worded that it will fit any type lubricant.



One reason for stencil lettering is that Sohio makes extensive use of back-panel containers, which can be filled with any of several products and identified by actual stenciling. Large pails can be used for either 5 gals. of oil or 38 lbs. of grease, with either pour-spout or friction lid sealed on, simplifying inventory.

and black used for the design elements and lettering.

A white package, it is pointed out, gets away from the drab, somewhat dirty appearance often associated with filling stations. The containers also show any soilage immediately, prompting the station attendants to keep them cleaned up. This bit of psychology parallels the practice of painting the corners in industrial plants white to discourage workers from using them as wastebaskets for candy wrappers and other refuse.

An unmistakable family relationship is established throughout the Sohio line by use of a distinctive Sohio trademark, which includes an upright triangle above the company name and an inverted triangle below it, all enclosed within an oval. On the earlier containers, this trademark was varied considerably on different products and was somewhat crowded by the inclusion of supplementary copy.

In its modification for the new package line, the trademark has been streamlined and simplified, as indicated in the accompanying illustrations. On the Premium Quality line of containers, the outer oval has been extended to a point at the bottom, giving it a symbolic oil-drop or tear-drop shape. On other products, the oval is used without the pointed extension.

Another characteristic of the new Sohio line of containers is the use of bold stencil-type lettering on the packages to identify the type of product. This design motif serves a double purpose: it provides a pleasing uniformity of treatment and also lends itself to the actual stenciling in of this information on certain products for which "blank panel" containers are used. The blank-panel type of container, utilized for a number of products, simplifies the inventory problem by reducing the number of container types which must be stocked.

The prominent use of white on the new Sohio line of products, together with their moderate use of "sell" copy and related printing, gives the containers a quick recognition value which facilitates their employment in advertising and merchandising programs.

Examples of old containers displaced by new program. Although same basic colors were used, design was not clean cut and line lacked cohesion.



Household products drop the "filling station" look, but retain close family resemblance to the heavily advertised motor products. Warm gray and white stripes add to their feminine appeal.

Also, it is pointed out, the white backgrounds give free reign to the employment of color within the company's stations without producing a confused, jumbled effect.

Sohio HQ motor oil, repackaging of which is a part of the complete change of formula and type of product, illustrates the flexibility of the redesign program. For the HQ (Highest Quality) line, red was substituted for white as the background color. This reverse treatment gives the product immediate recognition value as a quality item, but family resemblance is preserved through incorporation of the Sohio trademark in a white rectangular patch near the top of the container.

Use of the established stencil-type lettering for the large letters "HQ" and the words "Motor Oil" also parallels the treatment followed on other new Sohio containers. An accompanying illustration of a 24-sheet billboard being used to introduce this product with its new package indicates how readily the bold, yet refined design approach lends itself to advertising presentation. This product, according to Mr. Wieland, has taken hold beyond all expectations and "there is no doubt that everyone is proud of its appearance."

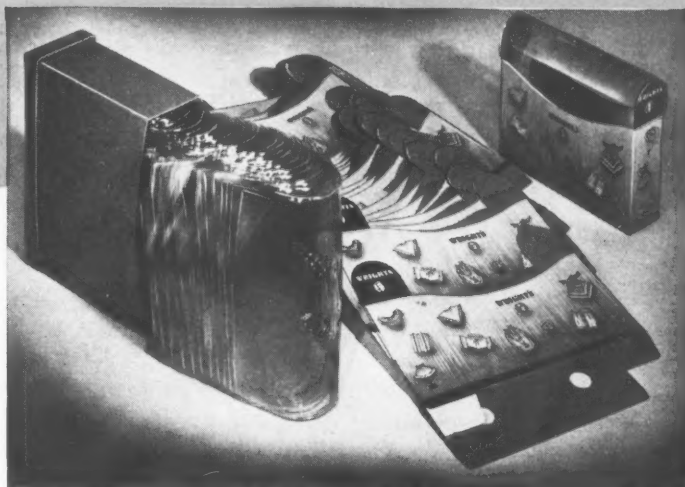
Apart from the concerted repackaging program, Sohio has been effecting some simplification of container sizes. For example, the company was able to eliminate its former 25-lb. and 50-lb. grease pails after determining that its 5-gal. oil pail would hold 38 lbs. of grease—just midway between the two previous sizes. Merely by adopting interchangeable tops, suitable in one case for grease and in the other for motor oil, it has been possible to use a single container size which holds either 5 gals. of motor oil or 38 lbs. of grease. No customer resistance has been (Continued on page 208)



WRIGHT'S RUFFLING



All-America winner is redesigned to meet current production budgets while retaining all of the visibility features of its prewar predecessor



Folding carton with upright end flaps is fitted with a beaded, curved, slotted cover of cellulose acetate. Product is visible and dispensed through opening in acetate. Blanks are shipped flat and covers delivered nested, as illustrated at right. Assembly takes place at Wright plant.

Trimmings and ruffling have always been difficult to handle on store counters and shelves. They are perishable and must be protected from soilage. They must also be packaged in such a manner that the customer can see the product and that the sales person can measure off required lengths.

In 1940, Wm. E. Wright & Sons Co., West Warren, Mass., leaders in the trimming field, were winners of an All-America Package Competition award for a rigid transparent container made of light-gauge cellulose acetate sheeting, which eliminated soiled merchandise and put Wright's trimmings in preferred impulse-display positions where they outsold competitive brands.

The war prevented Wright's from using the acetate container and forced the company to use a container which did not provide visibility. When wartime restrictions were lifted, the transparent container was again in demand, but due to increased costs, the margin for packaging did not permit re-adoption of the prewar package. The company decided to look for a container that would provide as much visibility as the prewar package, but compare favorably in cost with the wartime paperboard carton.

The newly developed container, now on the market, is meeting all the requirements of the prewar container at a cost that is within the allowable packaging budget. It is an excellent example of cooperation between user and package suppliers to design a specific package for a particular function, representing over a year of study.

The new package consists of a paperboard folding

carton with semi-circular flaps over which is fitted a curved piece of rigid transparent acetate sheeting, beaded and notched at each side to lock over the carton flaps. This curved cover gives complete visibility to product, yet protects it from shop handling. An oval opening in the top of the curved acetate permits the clerk to pull the ruffling out and cut it off in desired lengths. The packages are made in three sizes, to accommodate various types of ruffling. After a certain portion of the ruffling has been sold, the last few yards in the container may be pushed upwards so that the merchandise is visible to practically the last inch.

The cartons are delivered flat to the Wright plant. The transparent covers are nested and sent to the Wright plant separate from the cartons. With the cooperation of the supplier of the covers, methods of assembly in the user's plant were developed at a speed to meet requirements of the merchandise production.

The fabricator of the curved-beaded-shaped acetate even had to build special machinery to produce the transparent part of the package at a price to meet Wright's needs. The carton maker also encountered new manufacturing problems that had to be solved.

A similar type of combination plastic and paperboard package, with its advantage of flat shipping and storage, is now being produced by several suppliers.

CREDITS: Acetate covers, Kellogg Container Division, United States Envelope Co., Springfield, Mass. Cellulose acetate material, Vuepak, Monsanto Chemical Co., Plastics Div., Springfield, Mass. Cartons, Brooks Bank Note Co., Springfield, Mass.

CADO UP FRONT

Specialty writing

and marking pens come off the back shelf

into the spotlight when re-dressed in an effective package

When the weak link in the marketing chain is the package, product sales can't realize their full potential. This was the conclusion reached by Cushman & Denison Mfg. Co., New York, makers of the Flo-master Fountnbrush. Their product, a multi-purpose felt-nib writing instrument, was judged worthy and efficient. Their advertising and promotional activities attracted potential customers to sales counters. But sales lagged. The trouble was traced to a failure of the package to maintain the favorable customer impressions and clinch a sale.

Determined to strengthen the weak link, the manufacturer made a survey among dealers to get their reaction to the packaging. The results were startling in that they revealed dealers knew very little about the Fountnbrush. Some admitted to having it in stock, but not knowing what it was! Others seemed to have it completely confused with other products. Checking further, Cushman & Denison visited a host of stationery stores to see how their product was being sold. In far too many cases the packages were collecting dust on high, out-of-the-way shelves. The black color of the box served to obscure it. In the hands of the dealers, the package did not seem to invite attention or even curiosity. What was more, the old package did not disclose what the product is and how it is used.

With these observations fresh in mind, the company engaged a package consultant to help them solve their problem. It was decided that packages should: (1) educate the general public (and dealers) on the identity of the fountain brush as contrasted to the fountain

pen and (2) create a demand for the specific product.

All packages—three were planned—would carry an illustration of a hand writing with the brush. Its purpose was not only to show what the brush is for, but to establish its general character and size. A second educational feature, the slogan "Writes · Marks · Draws on *anything!*" was to appear near the illustration.

Because the black of the old package had been so ineffective in stimulating sales, the fountain brush was slated for a colored package. One color—orange—was ruled out immediately, as surveys proved it to be far too popular a color for stationery packages. As a matter of fact, it was the company's observation that about 90% of stationery packages are orange, orange and black, or just plain black. A distinctive color was therefore sought and a magenta was chosen. This bright color, it was felt, would attract attention and be distinctive enough to establish in the minds of dealers and customers the identity of the Cado (the company trademark) line.

The consumer package

A full-telescope set-up box was chosen for the basic introductory consumer package. The top of the box carries the hand-holding-brush illustration, slogan, trade name and company identifications. One side panel has an illustration of the brush and on the other side panel the guarantee is printed. Trademark and identification of package contents are given on end sections. Printing is done in black, white and magenta.

A paperboard platform and divider holds in place the

Industrial marking set contains a large bottle of ink. Pen and parts are in folding carton alongside bottle in set-up box.



Same folding carton is employed as unit package in this eye-catching counter display holding six pens.





Rich magenta box color and pictorial suggestion of use replace former somber black package. New Cado trademark and hand holding pen, shown here on the consumer-instrument package, are used throughout entire line.

brush, a 1/2-oz. bottle of black ink, a glass filler tube and two felt writing nibs.

The consumer box is also used for selling a more complete writing set which includes the above items plus a tiny plastic vial for holding a sleeve adapter and additional nibs. (The sleeve adapter, when inserted in the Fountnbrush point, makes fine-line writing possible.) The only change necessary in packaging this set is the insertion of a different-type platform divider.

Industrial marking set

The box for the industrial marking set is larger than the consumer box, but is made of the same materials and has the same exterior appearance. Into it are put an 8-oz. bottle of ink and a small reverse-tuck carton which holds Fountnbrush, filler and nibs. This small interior carton is magenta and carries the usual trademark, guarantee and a picture of the brush. A paperboard platform brings the contents of the carton within easy reach.

Counter displays

The third package is a paperboard folding counter-display carton which holds six unit cartons—the same ones used for holding the fountain brush and equipment in the industrial writing set. The black, white and magenta color is maintained on the carton and company

Big sales booster is this counter display which offers a pen and scratch pad with an invitation to "Try it!"



identifications are the same, but the side panels are devoted to drawings illustrating the uses for the brush in home, office, industry, etc. An attractive display can be made with the top of the carton. The procedure involves a straightening of the three cover flaps, folding the top through the center, pushing through the cut-out illustration and tucking the front cover flap behind the rear brush carton.

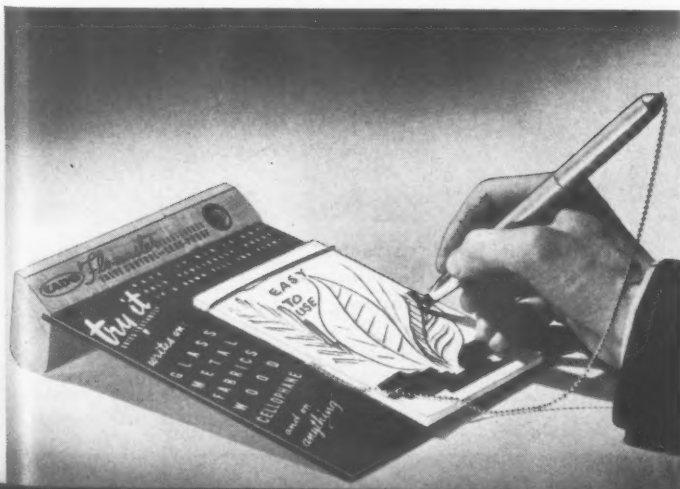
As a further step in their promotional program, Cushman & Denison have designed the Silent Salesman, a counter display to which is attached a fountain brush and a paper pad with which customers may experiment before purchasing. It has proved a most efficient salesman and its presence has always been accompanied by rising sales.

Ink labels

Ink, as a mainstay of the business, deserved special merchandising attention and got it through new labeling. Since the transparent inks are supplied in black and seven brilliant colors, the background color of the label was made to correspond with the ink color. The labels are therefore a means of quick identification of ink and are also instrumental in glamourizing an otherwise dull item.

What makes the package click

The packaging of Cushman & Denison is to be commended on several scores. There is a continuity throughout the family of packages; color has been used effectively in a field where (Continued on page 216)





Broadening the market for its Mortite weatherstripping material, J. W. Mortell Co. has adopted a new "Jr." folding box containing enough material to weatherstrip an average-sized window and has packaged four of them in a glassine-wrapped carton which can be sold as a unit or set up as a display. Display features the new trade character, Margie Mortite. Cartons, Container Corp. of America, Chicago.



Old counter grinder for Alka-Seltzer is replaced by new dispenser for unit-packed tablets in heat-sealed laminated foil. Carton for packets fits into acetate base. Carton, American Coating Mills, Inc. Printed laminated foil, The Dobeckmun Co. Packets, Ivers-Lee. Dispenser, Modern Plastics Corp., Benton Harbor, Mich. Acetate, Tennessee Eastman.

Display



Back piece of folding display carton holds actual box of Soilax cleaner, called to the shopper's attention by a large maroon arrow. This space-saving unit for 24 individual cartons measures only 8 by 13 $\frac{3}{4}$ by 6 $\frac{3}{8}$ in., a convenient size for grocers. Special lock-tuck bottom keeps cartons securely in place when unit is moved. Instructions for setting up display are printed on bottom panel. Display, The Ohio Boxboard Co., Rittman, Ohio.



Trial-sized bottle attached by cellulose tape to regular-sized bottle comprises introductory offer of Date Night Shampoo. Copy tells purchaser to use small bottle and, if unsatisfactory, return large size for refund. Display, Levine Bros., New York. Bottles, Knox Glass Associates, Inc., Knox, Pa.

Gallery



Matching display cartons tied in by color to the individual product packages are currently promoting the two forms of Iodent tooth paste. The display for No. 1 "for teeth easy to bryten" is red; No. 2 "for teeth hard to bryten" is printed in blue. Each carton holds six packages of dentifrice for self-service display on drug counters. Patch on side panel is provided for price marking.



Sales increases of 290% are attributed to Bromo-Seltzer's Profit-Planagram. Customers hesitant to disturb a symmetrical display feel free to remove cartons from this irregular set-up, stacked according to diagram accompanying unit.



Display cards which animate a pyramid of individual cartons are being provided for dealers of Arm & Hammer soda to suggest the many uses for this low-cost household product. They suggest soda as a dentifrice, for baked foods and as pure bicarbonate of soda. Displays, Fort Orange Paper Co. Castleton, N. Y. Art work, A. Halpert Studios, New York.



Over-sized, gold-colored metal needle mounted to transparent acrylic lever forms a 1-ft.-high display for Fidelitone Supreme phonograph needle. Motion of lever when pressed simulates motion of a record as it passes the needle. Display illustrates needle container made with record brush in base.



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Displa
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Gallery



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TRADEMARKS

Basic provisions of the new Lanham Trademark Act, as they affect packaging, were reviewed and analyzed at the time the law went into effect last July (see "The New Trademark Law," by Hugo Mock, MODERN PACKAGING, May 1947, p. 98). After five months of experience with the new law, further explanatory notes and examples may now be helpful.

The new act has stimulated tremendous interest in trademarks and the registration of trademarks. Within the first two weeks after the effective date of the new act, more than 10,000 applications for registration were reported to have been received at the Patent Office. Nevertheless, many packagers, considering whether their existing trademarks should be republished under the Lanham Act, have adopted a "wait and see" attitude. It is generally recognized that registration under the new law confers not only advantages—such as incontestability—but also possible disadvantages, such as cancellation proceedings by the Federal Trade Commission. None of the marks for which Lanham Act registration has been sought will be published until after the first of the year.

An understanding of the new trademark act presupposes knowledge of the definition of a trademark and how it functions. A trademark is a name used by a manufacturer to designate the goods that he manufactures or sells as distinguished from those manufactured or sold by another. It is an identification of goods for sameness of quality and singleness. A well-chosen symbol may enable an entrepreneur to secure profits from superior skill, industry or enterprise. It is the commercial signature of the owner and the identification of his wares. In brief, a merchant's mark is his authentic seal; by it he vouches for the goods which bear it. Therefore, according to historical development, economic trends and habits of consumers, the trademark functions as an indication of origin or ownership.

Designation of origin

Courts in the past have shown a reluctance to act as the guardian of the public in matters involving false and misleading advertising. The classical example is generally cited of the Grand Rapids Furniture Co., which had its place of business in Illinois and engaged in interstate sales. Grand Rapids, Mich., people thought that the good will which they had established was being irreparably injured; that "Grand Rapids" as applied to furniture is a trade name of great value and that they

had acquired the good will of the furniture-purchasing public. In that particular instance injunctive relief was granted, but such restraint was the exception and not the rule.

Today the Lanham Act authorizes the bringing of a civil action for unfair competition against the use of a false designation of origin. Under the act the deceptive use of the description "Grand Rapids Furniture" would be actionable by anyone who is or may be damaged by the falsehood, regardless of any wilfulness or intent to deceive. Hence, the act offers trademark owners unprecedented protection against infringement by others in the interstate shipment of goods. This is a novel addition to the law of unfair competition. Section 43 of the new act permits *any person* who believes himself likely to be damaged to bring an action against another who shall have falsely designated the origin of his goods or services.

Again, assume that a trademark is used by one Jones in the East and is registered under the outmoded act of 1905. Later, Jones learns that a competitor was previously using the same trademark in the West and the latter now intends to enlarge his sales territory. Jones sues for infringement, admitting that his competitor might have acquired local rights in one or more states, but denying his right to expand further into interstate commerce after the date of the aforementioned registration.

The competitor contends that priority of adoption and use in good faith are the genuine criteria of ownership and that the purely local rights which he may have acquired within his area remain intact. Admittedly, Jones would not acquire any rights in the newly registered mark which would enable him to compel the distant competitor to discontinue his use of the mark, but the competitor will have rights to the name only in the section of the country where he is doing business and any attempt by him to expand may or may not be enjoined.

Decisions have not been uniform on the point.

Makers of Vaseline have been able to maintain that exclusive trademark because they have always used the generic term "petroleum jelly" along with it, clearly distinguishing "Vaseline" as their trademark. In contrast, "aspirin," originally an exclusive name, has become a generic, dictionary word, open to use by dozens of companies. The need for constant vigilance to prevent a trademark slipping into the vernacular is not changed by the new law.

* Member, Bar of the United States Supreme Court; Director of Research, Crompton & Knowles Loom Works, Worcester, Mass.

**More on Lanham Act's provisions;
their effect on labeling of packaged
merchandise. by VICTOR E. HILLMAN***

Under the Lanham Act, however, Jones could rely on registration as complete protection against subsequent expanding use of the same mark by another in interstate commerce. The fact of registration constitutes constructive notice of the registrant's rightful claim of ownership.

If anyone thereafter starts expanding the use of the same or a confusingly similar mark on goods of the same descriptive properties, such use will not be a bona fide use, since he is presumed to know that the mark has been registered in the Patent Office. This offers a real incentive to register under the Lanham Act.

Concurrent registrations

Today, Jones' competitor might be able to register his mark, depending upon the circumstances of the case. This novel provision of the new law takes into consideration that the same or a similar trademark may have been used in different sections of the country. The act recognizes that there may be more than one "first" user of a trademark. Under the former law there was a anomalous situation in which courts recognized the rights of two or more companies to use an identical trademark in different territories, but the Patent Office would allow federal registration to only

the "first" user. The Lanham Act now permits concurrent registration, but only in instances where concurrent use occurred prior to the application date of any registrant, for registration is constructive notice of the registrant's claim of ownership and excludes bona fides of a later user.

Consequently, concurrent registrations of the same or similar marks by different registrants are now permitted provided there was a concurrent lawful use in "commerce" prior to any of the filing dates of the applications and it is determined by the Commission of Patents (or a court on appeal) that the public will not be misled or deceived. When concurrent registration is granted, the certificate of the Patent Office will carefully limit the manner or territory in which each mark is to be used.

An end to ambush

The net result is that the Lanham Act outlaws so-called "ambush companies." Under the old law one who could prove first use of the trademark would prevail even if the trademark was not registered. National advertisers, in launching a new product, would make an extensive search to learn whether the contemplated trademark was in use. With an expensive campaign under way they would suddenly be confronted with a demand from a small outfit citing prior use, threatening suit and demanding an unconscionable price. The new law corrects such abuses. If a company does not register a trademark it will still have rights to the name—but only in the section of the country where it was doing prior business. On the other hand, the national advertiser who registers the trademark will be protected in all other parts of the country. He can no longer be attacked by remote companies. If he re-



ceives a letter of demand from another company using the same trademark he will stay clear of the prohibited area.

The question of conflicting trademarks also arises with reference to unrelated merchandise. In the past the courts enjoined the use of names like "Rolls-Royce" for radio tubes, "Dunhill" for shirts, or "Kodak" for bicycles, on the ground of unfair competition. "E. A." (Elizabeth Arden) on containers for cosmetics was held to conflict with use of the same letters on jewelry. "3-in-One" on lubricating oil was held to prevent registration of an almost identical mark for an adhesive cement. The outcome of more involved cases was by no means certain. Much argument and nebulous reasoning ensued and uncertain principles were applied in arriving at decisions.

The Lanham Act substitutes a simple rule for determining the issue of conflicting trademarks; namely, that a trademark previously used or registered by one party shall not be registered for another applicant if it is likely to cause confusion, mistake or deception when applied to the applicant's merchandise. The "confusion in trade" clause will now be applicable whether or not the goods are of the same descriptive properties. An attempt to register such a unique and distinctive word as "Kodak" for razor blades would most likely be denied on the ground of confusion. A common word like "Eureka" or "Excelsior" would be less likely to raise confusion and might be registerable. Rules for determining the likelihood of confusion under the Lanham Act will have to be evolved.

A limit on challenges

The Lanham Act offers greater security and much less room for upsetting trademark rights. It specifically limits the types of challenges that can be made after a mark has been registered for five years. Under the present law no trademark owner could feel comfortably secure after registration. The mark could be challenged even if it had been on the register for over 20 years. A

third party might contend that the registered mark was invalid and subject to cancellation; that the registrant was not the true owner, or that prior use in a particular area was involved. It was recognized that this left the registration open to challenge in perpetuity and subjected registrants to a continuing risk.

The Lanham Act offers greater security and less opportunity for vitiating trademark rights. It develops presumption of ownership, which derives from the registration of a mark, by allowing it to blossom into an incontestable right after its continuous use for five consecutive years. During the first five years the mark can be attacked; thereafter, expanded protection is offered. It is a reasonable provision, saying in effect that he who has slept on his rights for five years can no longer be heard to contest the validity of a mark that has become "incontestable" on the register.

Exceptions to incontestability

The Lanham Act specifies several situations in which a mark may be directly attacked even after the end of five years, the most drastic exception to incontestability being that the mark must not have become a common descriptive name of the article to which it is applied. The exception raises a loud warning against overpopularizing a trademark so that it loses its trade significance and becomes a generally accepted word of the every-day language. The situation raises a strange paradox in advertising. The advertiser wants the brand name to become a household word—yet that very advertising may endanger the trademark.

If a trademark owner is successful in getting his product mentioned in the dictionary as the general name for an article, the exclusive use of the name is lost. If a trademark is used in a dictionary or as a dictionary word, a demand should be made that it be put in quotation marks or that it be accompanied by a clear statement that it is a registered mark. Dictionaries sometimes protect themselves by a notation to the effect that the inclusion of a word should not be presumed to indicate



The familiar map of Canada as label background for the name "Canada Dry" was not registerable under the old law as part of the name. With the Lanham Act, however, rules as to geographical names and places are liberalized. Photo shows, at right, new Canada Dry bottles with fused-in color labeling which eventually will do away with the old-style paper labels shown on two bottles at left.

that the word may not be a registered trademark.

Again, an overpopularized mark will become a common descriptive name if the public no longer associates it with the goods of a particular company. Once this occurs, the mark is considered dedicated to the public. The name "Singer" for sewing machines passed to the public. It came to indicate the class and type of machine made by the company rather than an indication of its origin of manufacture. The designation became the identifying or generic name of a thing. Moreover, the name "Shredded Wheat" became generic and no exclusive right to its use was acquired. A product was in the minds of the consuming public, not the producer.

The essence of a trademark is its meaning in the public mind. In the case of "aspirin" the word came to mean only the kind of drug and not the source of origin. A priceless trade name became public property, a generic term. "Cellophane" likewise became descriptive of the product; it obtained a generic meaning. "Cellophane" was accepted as describing the product and not its manufacturer; the word signified "transparent regenerated cellulose film" rather than origin of manufacture. Such marks can still always be challenged under the new statute when they have lost their trademark significance.

Moreover, it is always incumbent upon a trademark owner to acquaint consumers with another name or designation for his product and avoid advertising the mark in a descriptive or generic sense. The Chesebrough Mfg. Co. insisted from the beginning on using two names for its product: viz., the trademark "Vaseline" and the generic description "petroleum jelly." The word Vaseline has therefore escaped the fate of "milk of magnesia," which became generic.

Surnames may be registered under the new act provided the primary meaning has become so insignificant that, for all practical purposes, the trademark implication has become its predominant and prevailing characteristic.

It is essential, however, that it should have become distinctive of the applicant's goods in commerce. The use of such a trademark for five years is considered under the new law as prima facie evidence that the

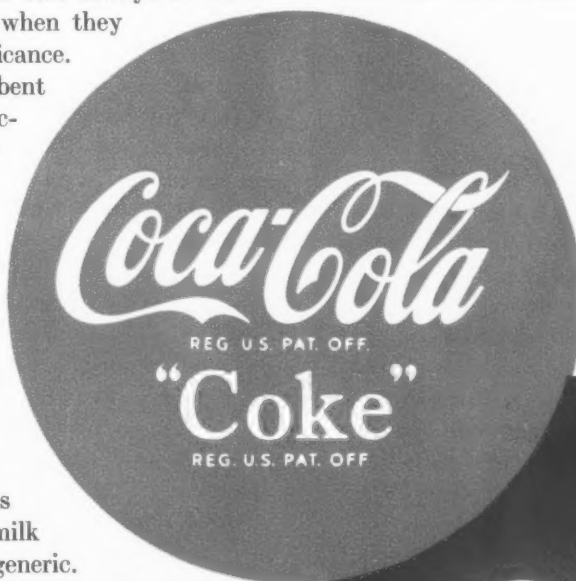
mark has become distinctive. Hence, anyone using a mark consisting of a surname can now register it after it has been in exclusive use for five years. The commissioner may find distinctiveness even in the absence of such five-year exclusive use in cases where he is satisfied that the mark has actually acquired trademark significance within a shorter time.

With tremendous sums being spent annually for radio advertising, trademark distinctiveness may well be acquired overnight in some cases. Of course, certain unregistrable marks can never acquire distinctiveness. This is true of the flag, the coat of arms and the Red Cross symbol. Moreover, there are prohibitions against the registration of the name or portrait of a living individual without his consent, or of that of a deceased president of the United States without the consent of his widow. These cases are the exception, however.

Generally speaking, the new law will make it possible to acquire the benefits of an incontestable registered trademark for many marks heretofore unregistrable. The Commissioner of Patents is given wide discretion in determining when an originally defective trademark reaches the status of registerability.

Likewise, the Lanham Act relaxes the present law's

Having lost exclusive rights to the "cola" part of its name, Coca-Cola recently registered the nickname "Coke" and is moving energetically to protect it. The red circle with both trade names will henceforth be noted on all of the Coca Cola advertising around the world.



Because it was too late in starting action, the Coca-Cola Co. lost its trademark fight with Pepsi-Cola. The court held Pepsi-Cola had a right to the "cola" name because it had gone uncontested for several years. Trademark owners must still be alert to challenge possible infringement.

ban against names which are merely geographical. The map of Canada lined in colors plus the word "Canada Dry" was not registerable. It was said that the mark might be understood by purchasers as indicating that goods were produced in Canada; that it would secure rights to individuals in that which is the common right of many and that a geographical name cannot point to personal origin or ownership of the article. Furthermore, the word "Midwest" has merely a geographical significance and was not subject to registration as a trademark. "Westgate" for canned fish was also denied on the ground that it was the name of a little town in Iowa or Kansas.

In the past a geographical word could not be registered even though it was only the name of some inconsequential town. Today, however, different rulings will apply and a word like "Kem" for playing cards will be registrable even though it is the name of a river in Siberia. Likewise, words like "Plymouth," "Aurora," "Reliance" or "Lincoln" may be registerable as applied to the goods of the applicant.

As before indicated, it is always advisable to indicate origin and ownership to the public. Too much modesty may result in loss of distinctiveness. If a seller or distributor is using the manufacturer's trademark under a license, the relationship should be made clear by some such language as "Paradox, made exclusively by its owner (X) for (Y)."

Licensees must be controlled

There is always the possibility of forfeiting trademark rights by allowing an unlimited number of licensees to use the licensor's trademark on articles which they manufacture unless supervision of control and production are retained. Indiscriminate licensing may result in deception of the public and lead to a complete loss of trademark rights. Formerly, a mark could only be registered in the name of the licensee on its own application. Today, registration is granted in the case of divided use and is obtained in the name of the licensor, but he must control the nature and quality of the goods in connection with which the mark is used.

Control has nothing to do with stock ownership. The case is cited of a bakery that was the owner of the trademark "Federal" for a certain type of bread. Many others were allowed to use that name on bread not manufactured by the original concern nor under its supervision or control. The mark was declared forfeited by the courts because it had ceased to indicate origin and ownership to the public. Furthermore, the Lanham Act for the first time also gives statutory recognition to divided ownership in cases involving holding companies and subsidiaries, but control is still of paramount importance.

Moreover, it is always desirable to enjoin unauthorized use of a trademark. Competitors must be alert to challenge any marks which they believe infringe on their own rights. "Vichy" was originally a trademark for a famous mineral water in France, but it finally lost all trademark significance in the United States. When

the French Republic sued the Saratoga Vichy Spring Co., the court observed that water was dealt out by the glass under the name "Vichy" at many places throughout the country. The mark was lost because it became just another name for sparkling water. The French Republic had allowed the name to become generic and indicative of the character of the water.

It might also be mentioned that for many years the Coca-Cola company took no action against a smaller concern that was manufacturing Pepsi-Cola. When Pepsi-Cola finally became a serious competitor, Coca-Cola tried to stop the imitation of part of its name. The court decided against Coca-Cola on the ground that it had condoned the practice for a long time. The prefixes "Pepsi" and "Coca" enjoyed protection, but "Cola" was held to have become a common descriptive term for a beverage. Trademark owners can no longer sit back and then challenge the validity of a mark at some future time.

Dead wood cleared out

The Lanham Act has provided for the elimination of dead wood. In the previous system, trademarks were valid for 20 years. Consequently, the files in the Patent Office were filled with names no longer used. Under the new act, trademarks will die in six years unless the registrant files an affidavit of use or an affidavit of circumstances. The former alleges that the mark is still being used and that there is an intention to continue its use. The latter sets forth that in view of circumstances beyond the control of the trademark owner he is obliged to discontinue its use temporarily, but that he has no intention of abandoning it.

Under the old law, registration was occasionally denied when a mark was not placed on the article or package. The Lanham Act eliminates the antiquated requirement of affixation. This change will be of considerable benefit to trademark owners who advertise by word of mouth or over the radio to popularize their mark, even though the mark is not attached to the merchandise.

It will benefit oil companies whose products (gasoline and oils) do not lend themselves to physical affixation. A well known case has been cited where a trademark for a "dry-cleaning system" was refused registration on the grounds that the trademark could not be affixed or applied to the system. Such a mark may now be easily registered under the Lanham Act.

Corporate names

Under the displaced law, a company could, in general, prevent anyone else from using its name as a trademark on any other merchandise. The 1905 statute prohibits the registration of any mark which consists merely of the name of a corporation. It may be recalled that Holly Moulding Devices Co. attempted to register the name "Esquire" for a hamburger-molding machine. The well known publication of the same name resisted and opposed registration on the ground that an attempt was being made to appropriate (*Continued on page 200*)

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*T. M. REG. U. S. PAT. OFF.

Ninth Annual Forum of the PACKAGING INSTITUTE

Hotel Commodore, New York, Nov. 18-19, 1947

In introducing Dr. Laurence V. Burton as the new executive director of the Packaging Institute at the organization's Ninth Annual Forum at the Hotel Commodore, New York, on Nov. 18, President Mason T. Rogers remarked that the acquisition of Dr. Burton marked the most important forward step in the Institute's history.

In his response, Dr. Burton, former Editor of *Food Industries*, indicated that he had already tackled the Institute's problems by outlining a list of 18 projects which the organization might undertake for the betterment of packaging. He solicited the members' advice on these and any other problems, as to whether they were urgent or unimportant and whether they should be undertaken now or later. A summary of Dr. Burton's remarks, as well as those of the other speakers at the two-day conference, is given below.

The current administration was returned to office when the board of directors re-elected President Rogers and the two vice presidents, A. F. Stevenson of The Borden Co. and George W. von Hofe of the New Jersey Machine Corp. At the general membership meeting following the Tuesday morning session, reports were received from the Advisory Council, the Standards and Practices Committee and the Technical Committee, and four new directors were unanimously elected to the board: Charles L. Barr of the F. B. Redington Co.; J. H. Gilluley of the Anchor Hocking Glass Corp.; O. L. Scheller of Sunshine Biscuits, Inc., and Lloyd I. Volckening of the Ivers-Lee Co.

Registration for the conference, the two luncheons and the annual banquet totaled 465, well above last year's figure.

TUESDAY MORNING

Chairman, W. O. BREWER, Manager, Pharmaceutical Sales, Calco Chemical Division, American Cyanamid Co., New York.

Projects for the Packaging Institute—DR. LAURENCE V. BURTON, Executive Director, Packaging Institute, Inc. I can mention only a few of the projects that seem to be worthy of our efforts in the coming year. I want you to advise me.

Should we have *methods of recording production speeds*? Is it sound package engineering to measure speeds for an hour or two and call this the average production speed? Can a production manager give his sales manager a correct estimate of costs of production on the basis of maximum possible speeds, or must there be due recognition of the frailties and perversities of men, materials and machines? Is this a type of problem that deserves study by the Institute?

This brings up the desirability for *standard operating costs* expressed in man hours, kilowatt hours, product wastage, packaging-material wastage, interest on equipment or capital interest charges, rent and the like, per 1,000 or per 1,000,000 units packaged over long periods of time—at least a month, though preferably over several months. Naturally such figures should be related to the type of packaging operation, e.g., liquids, solids, free-flowing solids, plastic substances, irregularly shaped objects and the like. We ought to know what is bogey on a given course. But we must first agree among ourselves on how to *measure*

the operating costs of packaging in the manufacturing plant.

All of you are familiar with the term "unit package." In a comparable sense a unit operation is a physical action that is incapable of being further broken down into simpler functions. Thus, filling, wrapping, sealing, tying, bundling, closing, labeling and the like, are functional concepts. We need to know how to do them better and more economically, but to do this we need to measure our current performance by a *study of unit operations*. Obviously the Institute cannot go into your plants and conduct searching analyses, but we can cooperate with you to set up criteria and standard methods and definitions.

It has been said that it took World War II to convince official Washington of the importance of packaging—that a perishable food cannot be preserved commercially without an adequate package. Now we face the *Marshall Plan*, which contemplates shipping huge amounts of non-perishable staples overseas, plus the *increasing danger of World War III*. Let us be certain that we have the proper perspective on the problems arising during an emergency. We ought to be ready with well-considered plans for substitutes and alternative plans of action.

Is the effect of the modification of Rule 41 on shipping containers something this Institute should study?

Liaison with other organizations to ascertain their packaging needs and to ascertain the import of their decisions on packaging problems should not be overlooked.

Should we keep an *up-to-date file of all regulations* regarding shipping containers issued by common carriers? Is this something you want done, or are all of you doing it yourselves?

Should we make a *survey of the location, age and condition of packaging machinery*? This would be of future value to machine builders and their design engineers; it would be of national value in case of an emergency.

Should we set up *tables of tolerances* that represent good practice in the packaging operation?

Should we study the *mathematics of deceptiveness of containers*?

Should we determine how to set up a *packaging laboratory*?

Should we study how to *plan a packaging line*? Who decides what speeds, flexibility, adjustability, capacity? Whose responsibility is it to coordinate engineering, production and the like with the package itself?

Should we have a study of *tough jobs of packaging*, e.g., how to fill automatically a product that is soft, bridges, will not flow by gravity and has a negative angle of repose?

Should we have studies on successful methods of *increasing speeds of packaging operations*? One manufacturer now labels cylindrical containers at the rate of 1,000 a minute on one machine. How and by what steps did he reach this speed?

Should we collect reports on *quality control* in packaging? This would include inspection of incoming supplies, inspection of all packaging operations such as seals, register, etc., how much such inspection costs and how much (if anything) is saved by such quality control.

Should we have a survey of the *unsolved problems of packaging*? What is it that production members want, but cannot

SUGGESTED P.I. PROJECTS

(The following questionnaire was distributed following Dr. Burton's talk. It is reprinted here for the benefit of those who could not attend. Both members and non-members are invited to reply to the Packaging Institute, Inc., 342 Madison Ave., New York 17.)

What is your vote on the importance to your company and needed priority of those possible projects for the Packaging Institute?

	Needs Study	Unim- portant	When?	
			Now	Later
1. Methods of recording production speeds.				
2. How to measure packaging costs.				
3. Study of unit operations of packaging, e.g., filling.				
4. a) Effect of Marshall Plan on packaging.				
b) Effect of possible national emergency on packaging.				
5. Effects of revised Rule 41 on shipping containers.				
6. Liaison with organizations that affect packaging.				
7. Keep file of regulations regarding shipping containers on common carriers.				
8. Survey of age, type and location of packaging machinery.				
9. Tabulate various tolerances of spoilage in packaging operations.				
10. Mathematics of deceptiveness of packages.				
11. How to set up a packaging laboratory.				
12. How to plan a packaging line.				
13. Tough jobs in packaging.				
14. Methods of increasing speeds of packaging operations.				
15. Economics of quality control in packaging.				
16. Unsolved problems of packaging.				
17. Bulletin reports on:				
a) Vacuum packaging.				
b) Nitrogen packaging.				
c) Trends in package for greasy materials.				
d) Survey of consumer desires.				
e) Standardization of package sizes.				
18. How to differentiate between a packaging problem and a different sort of production problem.				
19. a) Please list other projects you believe the Institute should study.				

b) If officially approved for study, will you cooperate?				
Yes _____ No _____				
Your name _____				
Your company _____				
Company address _____				
Member of Packaging Institute? _____				
Yes _____ No _____				

get? We might give the machine and supply members a more adequate basis for future development.

Should we prepare *bulletin reports* for members on such subjects as: vacuum packaging, nitrogen packaging, trends in packages for greasy materials, consumer demands (such as containers that will not spill when opened), etc.

We might work on *analysis or diagnosis of packaging problems*. Here is a place where the Packaging Institute can be of considerable help to its members. It can help them to diagnose problems that *seem* to be packaging problems, but may actually be processing or other types of problems.

Packaging is only a part of the entire process of manufacture and distribution of goods. Yet, to handle packaging problems successfully, it is necessary to understand correctly the relation of the part to the whole.

New Developments in Machinery and Supplies—GAR W. REESE, *Manager, Development Division, American Can Co., New York*. Packaging in this country has not only kept pace

with the production of consumer goods, but in many fields has made gains well in excess of the average volume increase of those commodities. For example, the amount of paper used today in packaging exceeds the amount of paper used for all purposes, including book publishing and newsprint, 13 years ago. In the case of metal containers, if granted some relief in the raw-material situation, it is safe to predict that more cans will be used in both the food and non-food fields than were used before the war, unless new government restrictions intervene. Glass, with the solution in sight for shortages of critical chemicals, will be a more important factor than ever before on the ever-expanding packaged-commodity front. Indeed, the wooden-box industry, thought by many to have been relegated to the past because of the conspicuous growth of fibre containers, is today three times what it was in 1913 and is enjoying consistent development.

Unquestionably, World War II gave greater impetus to functional packaging than anything before. This program taught a number of lessons, among them a true understanding of the value of research and development. Management has spent

some time in thinking about this lesson and is now doing something about it. In 1920 about 29½ millions of dollars were spent on research. In 1930 about 116 millions of dollars were spent. In 1940 about 234 millions of dollars were expended. An estimate for 1947 is in the neighborhood of 450 millions of dollars. Industrial research personnel increased from 9,300 in 1920 to about 133,000 in 1946.

This expanded research program means that many new packaging items will ultimately pour onto the market each year. With the end of the sellers' market will come a flood of new packaging materials, containers and equipment. Products that will do the packaging job better with greater consumer appeal, increased tensile strength, greater resistance to water-vapor transfer, more water repellancy, greater corrosion resistance—all will affect the competitive position of our present products.

Research and development work does not confine itself to improving quality; it also cuts costs. Some of these new packaging materials are going to be less expensive than those which are used today. And, in a period of falling prices, less expensive materials may produce extensive changes in the present packaging picture.

What can be done to protect our present positions? First and most important, if we have not already done so, we must step up our own research and development. Secondly, we must keep ourselves informed of "What's New in the Packaging Industry"—we must know what the other fellow is doing.

There are a number of sources of information that one can tap to keep himself well informed about the packaging industry. The most prolific source of new items is the trade journals. These do an excellent job of reporting new developments and render a very important service to the packaging industry.

There are a number of other important sources among which are the "Packaging Abstracts" and the "Packet" distributed by this Institute. However, the Institute is so concerned with the problem of keeping its members informed about new developments that it was decided to inaugurate a supplementary service in which the members of the Institute would be asked to describe new developments that they have planned to introduce during the current year. Accordingly, last August a letter was sent to each member requesting pertinent information on their new products.

It is the purpose of this paper to report on about 20 selected replies which were received from members of the Institute. A few more replies were received, but it was decided this first year to discuss only representative developments, with the hope that the members would gain a better understanding of what was desired and that a much larger response will be obtained in the future.

(Mr. Reese then mentioned 20 developments, all of which either have been covered in previous issues of MODERN PACKAGING or are scheduled for publication in the near future.)

Comments of a World Traveler—DR. FRANCIS CHILSON, *Industrial Consultant, Scarsdale, N. Y.* As many of you know, I have in the last year been in Australia, Puerto Rico, Ireland, England, France and Switzerland. The importance of production—increased output—can best be seen in Puerto Rico, where the government is attempting to alleviate the appalling poverty of that over-populated island by developing local industries. There have been several successful installations, including a ceramics plant, a plastics plant and a bottle-blowing plant. I went down to consult on the establishment of a packaged-goods plant which would produce pharmaceuticals, cosmetics, household chemicals and certain food products.

Australians like us and we like them. Their attitude toward production is very much like ours. They like to do things in a big way and, indeed, they are very likely to introduce mass production techniques before they have the volume to support them.

Plants in Australia are, as a rule, smaller than ours, but in a few cases they are larger. Nicholas, Ltd., is one of the largest

manufacturers of aspirin tablets in the world. The present plant is equipped with the latest automatic tablet-processing and packaging equipment and a new plant of several hundred thousand square feet is now being designed.

All over Europe I found specimens of package design turned out by Swedish, Dutch, Swiss, German, French manufacturers which compare with the best that has been done in this country.

The Swiss have made watches for such a long time that the manufacture of precision machinery—packaging machinery included—is second nature. Kaestner Bros. in Geneva, Switzerland, have made automatic wrapping and cartoning machinery, as well as various other types of packaging machinery for many years and this equipment was shipped into Germany, into the United States and, indeed, all over the world. In the Schupbach Works at Burgdorf, Switzerland—manufacturers of various kinds of plain, colored and printed foils—all the machinery for rolling foil was designed by their own engineers. I was never in a more efficient plant, nor did I ever see more accurately designed high-speed equipment.

Manufacturers of packaging materials, packaging equipment and of packaged products have an extremely difficult row to hoe in France. In one instance, I discovered that an order for \$28 worth of spare parts for a packaging machine was refused by the Exchange Control Commission. Dollars are frightfully scarce in France. But it is perfectly obvious from looking at French packaged goods that they have not lost the French flair for design.

The situation in England is appalling. You fellows who had to operate plants during the war and up to now with insufficient equipment would go absolutely crazy over there. Because of the dollar shortage, because of the scarcity of labor, because of the shortage of materials, because of shortages and restrictions of every kind, a manufacturer may not even move his own equipment without permission. New industrial construction is possible only in quarters called "distressed areas."

Yet in London I visited one of the largest aspirin plants in the world, owned by the Australian company I mentioned before, and I found there the best of automatic equipment operating at high speed. The British business man is not licked.

TUESDAY AFTERNOON

Machinery Session—Chairman, CARL E. SCHAEFFER, *President, Stokes & Smith Co., Philadelphia.*

What the Machinery User Needs—DR. FRANCIS CHILSON, *Industrial and Packaging Consultant, Scarsdale, N. Y.* There always has seemed to be a lack of understanding between the suppliers of packaging equipment and the users of that equipment with respect to what might be called "production attitude." Machinery manufacturers generally have the drafting-room point of view rather than the production point of view. This attitude is becoming even more marked as time goes on.

For instance, few designers have any conception of what cleanliness really means. If you tell the average designer that the machine must be designed so that it is easy to clean, he understands you to mean "clean" from a machine-shop point of view, which is certainly not clean from the point of view of the man producing food products, pharmaceuticals or cosmetics.

Some years back I was associated with an endeavor to design special types of wrapping equipment for one of my clients. Two manufacturers of packaging equipment were involved in that project. One of them spurned the idea that a production engineer could possibly contribute anything to the design of equipment in which he was a specialist of many years' standing. Consequently, a fine looking streamlined machine was produced which did not work at the required speed and it could not have worked at the speed that was required of it on a 24-hr.-a-day basis which was necessary in that particular plant. There were too many reciprocating motions in the equipment. There were also too many parts that required daily attention which could not be gotten at quickly.

On the second attempt I insisted that the manufacturer send

his chief designer into the plant, not to study packaging problems but to study *production* problems. I wanted him to learn how paper would come to his equipment. I wanted him to see how equipment is maintained in a plant operating 24 hrs. a day. The second attempt was better. The machine was tested in the manufacturer's plant, but it was amusing to find that the mechanics running the equipment on test had found that the loose tails of the paper rolls caught in the mechanism of the equipment and jammed it up. In order to make the machine function smoothly, they wrapped a piece of shipping tape around each roll. The machine worked perfectly, but nobody in the machinery-builder's plant, even the designer who had come to study production conditions, realized that in actual practice the rolls would not be delivered to the machine with a band of tape around them, but would be delivered to the equipment with the tails flying. The outcome was that the entire intake mechanism of the equipment has to be completely redesigned.

I have had a great deal of sad experience with powder-filling mechanisms. I have had a great deal of trouble getting filling accuracy, dustless operation, ease of change-over, ease of maintenance and perfect cleanliness. The machinery manufacturer makes little effort to try to reproduce the production conditions under which his equipment will have to operate.

Machinery manufacturers could absorb a great deal more of the production point of view if, instead of taking bright boys out of engineering schools and training them to be designers, they would hire their designers from the plants of the users of equipment, or at least put their bright boys to work as installation mechanics in production plants where they have some opportunity to find out what production means.

The situation might be helped if you all had better-trained service men. There is a decided tendency among some machinery manufacturers not to send the best men out on the road, but apparently to send the worst.

I know that the manufacturers of equipment have a difficult problem. They must produce standard equipment to handle a wide variety of products. If you could turn out packaging equipment on a production-line basis like automobiles, each exactly like the other, everything would be fine and you would all make a lot more money. But your standard equipment has to be adapted and adjusted to the conditions in particular plants before it operates satisfactorily.

I am fully aware of the fact that users of equipment are sometimes of no help at all. Often they have no mechanics worthy of the name. More frequently they have no experienced engineers. Also, mechanics who set up packaging equipment frequently have so little feeling for that equipment that it is often operated when not precisely in adjustment.

Machinery manufacturers can do their part by making certain that they are so organized that when the word of a company representative is given, it will be backed up. They can make sure when they are ready to deliver equipment that it conforms exactly with what was ordered and that all of the parts involved in it have been thoroughly inspected. They can make sure that when the machine leaves the plant it is in working order. They can train their designers and service men to be better production men, so that they can fully realize the problems involved in using their machines in a chain of production sequences, of which their machines are only one part.

Machinery Performance—A. F. STEVENSON, *Production Manager, The Borden Co., New York*. My talk is also concerned with the need of more understanding between machinery manufacturers and production men. This is more essential today than it was back when we were paying 40 cents an hour for labor. Today we are paying 85 and 90 cents and labor rates are going higher. Moreover we are not getting as good people in our plants as years ago. It is necessary to change production methods to meet these conditions.

No longer are we interested in machines that will produce 20 or 60 packages a minute. We are mildly interested in 100 per minute, but what we want is 200 per minute. But the higher

the speed, the more temperamental are the lines. Today we must have equipment to which adjustments and changes may be made quickly. Machines should be simple, with as few parts as possible. They should be easy to lubricate. With today's maintenance costs, we cannot afford long delays for changes. We've had machines that take a whole week-end to change over. This means lost time and money that would not have been spent if the machines had been designed differently.

There must be better coordination of machinery on the same line. A powder filler with a speed of 150 a minute must meet a capping machine that produces at the same rate. If it doesn't, you are likely to have the problem of some of the powder snapping out. Products used to be cheap, but some powders today are worth as high as \$2 a pound. Think what the loss of an occasional dram is on that basis. We cannot afford to have those losses.

When buying machinery, it is necessary to find out what parts wear out. Such parts should be designed to be replaced easily. The method of cleaning the machine should be studied. Often a set of gears is left exposed and can't be cleaned or lubricated easily. Such gears might have been covered or, if possible, be run in oil. Such improvements mean much to the operator of a plant. Accuracy of fill is extremely important, particularly today when government regulations concerning fill are strict. We'd pay almost any price to get accuracy of fill at high speed. We believe all fillers should be net-weight fillers. The problem is not easy, because of the variations in product. On days of high barometric readings, certain powder products may be fluffy. When the barometer drops, they become dense. We cannot change that product, because that is what we are selling. We must fit the package and the equipment to the product.

More attention should be paid to conveying equipment. There can be as much trouble getting a product to the line as packaging it when it gets there. Some conveyors are hard to clean. Some conveyors wear out, some don't. Conveyors wear out on a coffee product, yet wear forever on a milk line—but we don't want to put "conveyor" into the product!

Every jar today should be dated and a method of dating should be in the line. It sometimes takes three or four operators at 85 cents an hour to do such dating and that's a lot of money.

Case packing has become more complicated with new types of display cartons. There should be more cooperation between carton makers, equipment makers and production men on this problem. The extra cost for properly designed equipment could be absorbed in a month's operating costs.

Users of machinery have been oversold on speed. A machine for which 250 per minute may be claimed does well if it does 150. The machinery maker estimates the speed in test runs with empties. The same speed cannot be attained with filled packages.

Production men are not complaining, but we are pleading for assistance and are willing to pay for it. If you say it will cost \$1,000 more to encase gears, it won't shock us. And if we get 90% of the high speed you claim, we'll put up the flag. We've seen one installation recently sold to do 150 per minute. The machine is now operating at 160. It is one of the most beautiful lines I ever saw and it shows what can be done when the machinery maker has the "production" point of view.

General Session—Chairman, HENRY W. STEVENS, *Vice President, Benj. C. Betner Co., Philadelphia*.

Perspective on Packaging—C. W. BROWNE, *Editor-in-Chief, MODERN PACKAGING Magazine, New York*. Right now, the international situation imposes new responsibilities on packaging. Billions of dollars worth of foods and other goods are being sent to Europe. All of this means packaging. It is one of the greatest challenges to the packaging field—perhaps for the peace and security of the entire world—to see that every package that goes abroad be clearly marked and labeled in a way that shows these goods come from the United States.

A broad comprehensive view of packaging is comparatively rare. In this extensive field, objectives vary widely and there are high degrees of specialization, but the individual can do a better job through familiarity with all aspects of packaging.

Today, emphasis is on the competitive aspects of merchandising. In packaging this means a more or less competitive clashing between hundreds of packaging materials and forms. Competition serves to stimulate improvement, but it also brings pressure of cost reduction. In this struggle, the greatest care must be exercised that there be no sacrifice of package quality and protection to meet price.

Metal Closures—L. L. LAUVE, *Crown Cork & Seal Co., Baltimore, Md.* Excluding crowns for beer and soft drinks, also excluding metal closures for dairies and home canning, the metal-closure manufacturing industry will make about 8,000,000,000 closures this year. This amounts to about 57 closures per man, woman and child in the United States.

The manufacture of well-made metal closures is a precision business, not only from a chemical standpoint, but in the physical gauging of close tolerances in thousandths of inches.

Cold rolling of the steel to 0.008 to 0.010 in. thickness requires skilled and accurate workmanship. The work hardening must be removed from the steel to permit its drawing into primary shells by stamping. Then, after annealing, the coils of thin-gauge steel are skin-passed, to give a smooth finish and next plated with tin.

Solid-color coatings are applied to the tinned sheets in coating machines followed by baking. When decorative designs are involved, each color must be applied by a separate offset printing operation. Protective coatings for the interior of closures intended for sealing different products constitute a big field of endeavor.

From stamping presses the closure shells go to threading machines to become either screw caps or lug caps, accurate as to depth and diameter, as to depth of threads or lugs, thread pitch and contour, and precise lug formation.

Closures must be made to take the standardized tolerances of glass containers which range from 0.015 to 0.040 in., depending on the size of the container finish and the tolerances at different dimensions or parts of the finish. This requires close cooperation between closure manufacturers and glass-container manufacturers to conform to specifications set up by an association and a standardization committee of engineers from the various companies.

The liner facing, in contact with the product packed, introduces factors of chemical attack, penetrations, evaporation or even spoilage. The quest for better liners is a pursuit that is never ending.

Properties and Uses of Glassine Paper—P. S. BARNHART, *Technical Director, Westfield River Paper Co., Russell, Mass.* The marked transition in food packaging throughout the past 15 years has brought about exacting demands on the part of the food packers for wrapping materials of superior quality emphasizing adaptability to machines and products packed, good appearance and the ultimate in protective properties. Glassine paper has made its own contribution, both scientifically and artistically, and in its many forms of coated, waxed, laminated or plain glassine has given the converter and food packer a product which will satisfy most conditions.

Varying amounts of sizing materials, pigments, fillers, gums and starches may be added to the beater process to produce papers of desired qualities and shades.

Glassine papers possess the following functional properties: (1) Resistance to the passage of oils and greases. (2) Resistance to gas transmission. This is a great aid in the prevention of rancidity. (3) Resistance to contamination by molds, spores or infestation. (4) To protect previously sterilized articles from infection. (5) Resistance to the passage of flavor and odors. (6) When laminated, waxed or coated, it is resistant to the passage of water vapor when packaging dry or wet products. (7) High wet strength on specially treated papers.

In connection with the newer developments which the glassine industry has given to the food-packaging field, laminated glassine, coated glassine and coated laminated glassine stand out more prominently than others.

WEDNESDAY MORNING

Chairman, DR. RALPH I. CLAASSEN, General Superintendent, Hiram Walker & Sons, Inc., Peoria, Ill.

Closure Liners—J. M. WHEATON, *Supervisor of Technical Division, Packaging Research, Owens-Illinois Glass Co., Toledo, Ohio.* The chief function of closures, whether metal or molded, screw cap, lug cap, spun-on or crown, is to hold the liner tightly against the glass finish. The liner forms the seal. No closure is better than its liner.

Four years ago our company initiated a program of research to study the fundamental factors that determine liner performance. Although research is far from complete, certain findings have been uncovered. It may be best to show some of these findings by means of throwing lantern slides on the screen. (Mr. Wheaton then showed a series of drawings and charts.)

Chart I listed 10 liner requirements: (1) low water-vapor transmission, (2) low alcohol-vapor transmission, (3) resistance to leakage, (4) adequate chemical resistance, (5) freedom from pinholes, (6) low permeability to essential oils, (7) lack of odor, (8) low solvent transmission, (9) non-adhesion to glass, (10) non-toxicity.

Chart II illustrated the difference between water-vapor transmission and leakage, showing that leakage occurs between the liner and the glass receptacle and that water vapor escapes through the liner itself.

Chart III illustrated the degree of alcoholproofness of three materials. Aluminum foil was shown to have practically no alcohol transmission; polyethylene, a medium amount of transmission per day, and Silite, a very high rate of alcohol transmission.

Chart IV showed how the liner can cause a slack-fill appearance. An approved liner allowed the loss of only $\frac{1}{8}$ -in. depth of liquid while the level of the liquid in a container having an unapproved liner had dropped $\frac{3}{4}$ in. from the top of the bottle.

The choice of liners is of primary importance when packaging foods, candy and other products in glass. This choice of liner should be taken out of the rule-of-thumb category and put in a scientific classification.

Gift Packaging—H. C. MINNICH, *Advertising and Sales Promotion Manager, U. S. Printing & Lithograph Co., Cincinnati, Ohio.* After a lapse of five years, gift packaging has staged a spectacular return this holiday season in many and varied gift lines. This is due to three basic reasons: (1) decorative packaging materials have been in better supply this year and many new developments in materials are available for the first time, (2) the lapse in gift packaging during the war years has given gift packagers an opportunity to make a fresh start in their plans, with the result that gift containers this year reflect more imagination and ingenuity in design and better conceived merchandising plans, (3) competitive selling conditions in many consumer gift lines call for better gift packaging along with other improved merchandising methods for the holiday buying season.

Broad merchandising objectives of a gift-packaging program include efforts to increase the acceptance of a product as gift merchandise and thereby promote its ultimate purchase as a gift item, to help increase the consumer's satisfaction with the gift item after purchase and, also, the satisfaction of the ultimate recipient of the gift, thereby creating additional good will for the product and the manufacturer, and to secure better display of the product at point of sale during the holiday merchandising season.

For the most part, the kind of merchandise packaged as gifts seems to be those articles which in themselves make the more acceptable gifts. As a matter of fact, it has always been a fundamental principle of gift packaging that such items have the best chance to succeed in gift containers.

However, there have been and are now, exceptions to that rule. Just the other day, I read where an item, totally lacking in glamour and gift appeal, will be gift packaged this holiday season. It is the automotive spark plug that will have sparkle and glamour

thrust upon it by an attractive Christmas package. The manufacturer—one of the large ones—believes that gift packaging will not only promote the sale of spark plugs as Christmas gifts, but also will help automotive-parts dealers sell other related merchandise as gifts.

The beverage industry is an example of a field that has many specialized legal, production-line and distribution problems in connection with gift packaging. Yet, many of the successful merchandising patterns of general gift packaging are applicable to that industry. In order to bring out this point, I am going to show color slides of more than a dozen current gift packages put out for this Christmas season. (Color slides were shown.)

Case Sealing—H. LYLE GREENE, *Vice President, J. L. Ferguson Co., Joliet, Ill.* It is my understanding that case sealing was a rather grim matter before the introduction of an automatic sealing machine. Some of the sealing methods employed before the early '20s include sealing with gummed-paper tape, sealing with stitching wire, steel strapping, wire binding and the use of weights on manually glued and folded case flaps. Today many shipping cases are sealed in the same manner, although improvements and refinements have been added.

While we naturally strongly recommend that cases be glued, and even occasionally hint the job can be done better with Packomatic equipment, we do recognize the desirability of other sealing methods in certain instances. Examples of such applications include shipping rooms and packaging departments where many varieties of shipping containers are being packed and sealed simultaneously, and where no runs of standard sizes can be handled.

The problems of the bottler or canner or other standard packager are usually easily solved through the use of the automatic case sealer. However, with the installation of this equipment, the question of floor space enters the picture. Automatic case sealers today occupy a strip from 20- to 60-ft. long by 2- to 5-ft. wide. The greater the speed of the production line, the longer must be the case sealer. Other problems must also be faced. Case sealers will be shorter eventually, due to a number of things, including improved fast-drying adhesives, as well as new methods of applying adhesives to case flaps.

Where the need of an automatic case sealer has been established, the buyer and the machine manufacturer must determine the proper or most practicable location for it. Machines are sometimes installed on specially built mezzanines and packed cases are conveyed to them for sealing. Occasionally a case sealer is suspended from the ceiling or the sealer may be installed at a point some distance away from the packing location—conveyors transporting the packed cases.

Another type of installation consists of the automatic sealer and a parallel return-roller conveyor.

To augment the efficiency of automatic sealing machines, automatic daters, coders, counters, numbering and imprinting devices have been developed. These attachments are incorporated in the gluing machine to operate in synchronization with it.

Food, Candy, Tobacco Seminar—*Chairman, A. B. BRACKETT, Packaging Engineer, Birds Eye-Snyder Division, General Foods Corp., New York.*

What Packaging Has Done for the Tobacco, Candy and Food Industry in the Past and What Packaging Might Do to Assist These Products in the Future—E. A. THROCKMORTON, *President, Container Laboratories, Inc., Chicago, Ill.* There are four functions which packaging performs. The first, a distributary function, is concerned with the life of the product from the time it enters the package to the time it reaches the consumer. Matters of quantities allotted to the package, transportation, handling and consumer-use considerations all come under this function. A product which could not be sold were it not for the distributary function of the package is rice.

The second function of packaging is mechanical protection which guarantees delivery of the product in proper condition. Keeping the product moist, dry or free from micro-organisms is

accredited to the third or preservative function of the package.

A fourth function of the package concerns product sales. It should be considered separately from the other three functions of packaging. Much trouble is encountered by manufacturers because they try to consider the sales factor along with the technical factors.

In analyzing the sales of cigarettes, we find that it is more economical to sell them in packages. (A cigarette would cost two and one-half times as much if sold singly.) An increase in sales can therefore be accredited to the distributary function. Product sales are also increased due to mechanical protection and preservation of product. But when the appearance of the package accounts for an increase in sales, it is due to the sales function of the package. Budgetary charges would be made accordingly. Improvement of package appearance would include printing, color and easy identification which appeal to the dealer and consumer. It has been established that if money is not spent on improving package appearance, some products cannot be sold. (Mr. Throckmorton showed statistical charts giving figures to prove that bulk sales have been decreasing over the past 40 years while the sale of packaged goods has increased over the same period. Statistical information was furnished by the U. S. Federal Trade Commission and the Bureau of Agricultural Economics, U. S. Dept. of Agriculture.)

In conclusion we can say that there are five reasons for the success of packaging. Packages are cheaper to handle and retail; brand identification gives assurance of quality; good mechanical characteristics are assured; quality of product is improved in comparison with non-packaged products; packaged goods are more economical for the consumer.

The Possibilities of the Use of a Rigid Container—*DR. C. OLIN BALL, Consulting Food Technologist, Maumee, Ohio.* If the likes and dislikes of wholesale and retail distributors could be wholly satisfied, most commodities would probably be distributed in flexible containers because commodities packaged thus occupy the least possible amount of space. The consumer also would have many uses for the space that could be saved by universal use of flexible packages. But the housewife demands the proper functional performance of packages in the kitchen and is therefore impelled by realism to seek packages from which the contents can be measured easily and without waste and in which the unused contents can be stored in a satisfactory manner. To meet her requirements in these respects, solid or rigid containers are produced. (Rigid containers referred to by Dr. Ball were metal, glass and board packages, not plastic packages.)

A complete analysis of the elements of merit upon which the actual selection of the types of consumer containers is made leads to the realization that the preferences of neither the distributor nor the consumer play a predominant role in that selection. Predominant among the influencing factors are several which do not come directly within the experience of either the distributor or the consumer. These are (1) cost of the container delivered to the packing plant, (2) functional ability of the container to protect the contents in storage and (3) other factors which influence the retail price of the packaged commodity. Among the factors which influence retail price are: (1) resistance to physical injury externally, (2) resistance to chemical or physical action of the product, (3) mechanization in handling and (4) space and storage requirements in the packing plant and in distribution. Solid containers are generally recognized as superior to flexible containers in all of these respects except those concerning price, space and storage requirements.

Experience leads to an automatic resolution of the composite evaluation of these grading points. The resulting practice, as of the present time, is to use rigid containers exclusively for sterilized foods and liquid foods, flexible containers almost exclusively for pasteurized solid foods, dehydrated foods, fresh fruits and vegetables. Both types of containers are widely used for frozen foods, dog foods, candy and tobacco.

Possibilities of a Flexible Type of Container—*R. R. MELSON, Marathon Corp., Menasha, Wis.* The outstanding character-

istic of flexible packaging contrasted to most rigid containers is its ability to be applied in just the amount required to provide the desired protection and appearance. Combinations of sulphite, kraft, glassine, parchment, cellophane, acetate, Pliofilm, Saran, vinyl films, aluminum foil, wax and plastic coatings are capable of providing any desired degree of water-vapor protection, greaseproofness, flavor and odor protection, as well as a certain amount of breakage protection.

Variations in the protection of products can be achieved with different types of liners, closures and wraps for the flexible package. It is possible to attain the higher levels of water-vapor protection required by hard candies and dry-milk products or to cut the degree of water-vapor protection needed by such products as dry beans and flour. The entire range of grease control, from mere resistance to staining up to long-term resistance to penetration of chicken fat, shortening and cocoa butter, is possible.

In the packaging of some products it is necessary to eliminate flavor and odor transmission. In others it is mandatory that foreign odors be kept from entering the package. In still other instances it is desirable that a certain amount of odor is allowed to escape—as in the case of popcorn. The flexible package can be adjusted to take care of all these variations.

Flexible packages lend themselves to attractive shapes, sizes, designs and printing. They possess the property of imparting the feeling of crispness, luxuriousness, warmth and quality to the customer, thus attracting sales. On the production line the packages offer convenience in filling and closing. They reduce the storage problem to a minimum.

The flexible-packaging engineer is still challenged with a number of basic problems. Among these are the construction of packages that offer greater insect resistance, development of reclosable packages and consolidation of liner and wrap materials.

Current trends in flexible packaging point toward simpler packages, greater appeal through printing and color and an increased production of packages on automatic equipment machines from roll stock.

WEDNESDAY AFTERNOON

Drugs, Cosmetics, Chemicals Seminar—General Chairman, R. H. RHODEHAMEL, Manager, Merchandising Development and Control, Eli Lilly & Co., Indianapolis, Ind.—Committee Members: DR. F. V. SANDER, Lakeside Laboratories; R. H. COOPER, Dr. Salisbury's Laboratories; F. H. BITHER, JR., The Upjohn Co.; E. J. HENRY, Abbott Laboratories. Three separate discussion meetings were conducted concurrently as follows:

1. Packaging of Drugs and Pharmaceuticals for Export, Shipping Container Design and Export Shipping, Regulations and Problems—Discussion Leader, J. A. WARREN, Package Consultant, American Home Products Corp., New York. Panel: JOHN MOUNT, Marine Service Dept., North America Companies, New York; J. F. NEAL, Chief Claim Agent, Alcoa Steamship Co., Inc., New York.

MR. WARREN: Export packaging has long been a stepchild of industry. Poor and inadequate packaging is not only blocking exploitation of world markets, but causing unnecessary economic loss. This is a market which the United States has to itself; it should not be neglected.

There are many factors that contribute to the economic losses suffered through faulty packaging. Customs duties must be paid whether or not the product is deliverable. The consignee, not having goods on his shelf, loses business. Orders must be augmented to take care of losses. High unit cost is effected through partial loss of shipment. Finally, there is a loss of good will toward companies and products affected.

MR. MOUNT: Ways of minimizing loss through faulty export packaging include: (1) the assigning of responsibility for export packaging to one person who will have authority to carry out the most efficient program and (2) to have that person consult with steamship and insurance companies on how his product can best be packed for export.

There are many considerations for the export shipper to keep in mind. Among these are: the susceptibility of his product to various conditions it will encounter, the kind of transportation to be used and the exterior pressures that can be expected. The shipper should take precautions against pilferage, loss and non-delivery. Above all, he should set up a system of code and symbol markings for packages which, when compared with the packing list, will give the consignee all the shipping information needed. Advertising of product or company name should be eliminated from all outer shipping containers. Advertising is an invitation to thievery.

MR. NEAL: Carrier claims have risen exorbitantly in the last five years. The steamship companies are taking all precautions to cut losses, but the packager must do his part. Shipments by export, unlike domestic shipments, have no set of regulations to limit loss. To remedy this situation the steamship companies are now trying to set up minimum-standard regulations, such as those issued by the railroads in this country. A policing organization directed by the insurance companies will carry out the regulations and also report on the condition of shipments upon arrival at destination.

Despite any regulations that may be adopted, the exporter will do well to investigate handling conditions at embarking and disembarking ports, labor conditions at these ports, climatic and sweating problems that will be encountered.

DISCUSSION: This evinced many hints on export packing, some of which are listed herewith.

Wooden and fibre boxes should not be strapped with wire. Bale hooks break wire. Use a tested curved (not flat) strapping. VUS board will stand considerable exposure to rain or water. Wet rigidity has not yet been developed.

Thermoplastic labels aid in preventing substitutions.

When shipping tube-packed products, point the head of tube toward inside of shipping carton to prevent breakage.

For shipping pharmaceuticals, order a vertical-grain box with dustproof corners. Close up gaps with white resinous adhesive to prevent pilferage.

Personal contact with the dock superintendent will often assure greater care of your shipments.

2. Control of Finished Packages—Discussion Leader, E. J. HENRY, Assistant to Vice President in Charge of Production, Abbott Laboratories, Chicago. Panel: F. H. BITHER, JR., Packaging Development Department, The Upjohn Co., Kalamazoo, Mich.; J. K. TAGGERT, Manager, Inspection Department, Eli Lilly & Co., Indianapolis, Ind.; C. MONROE WIEGAND, Assistant Manager, Avon Allied Products Co., Inc., New York.

Nearly 60 attended this meeting, practically all of them—by a show of hands—representing drug firms. The meeting was entirely informal with all discussion from the floor divided under six topics announced by Mr. Henry as follows: (1) Place where finished-package control and inspection fit on company organization chart. (2) Organization of finished-package control and inspection. (3) Personnel. (4) Attributes of good inspection personnel. (5) Training of inspection personnel. (6) Inspection, control techniques and procedures.

The meeting was characterized by a spontaneous exchange of ideas through ad lib reporting by those in the audience on such mutual problems as: employment of a roving control man under the manager of control to watch all packaging production and who is empowered to stop the lines when packages are not meeting quality specifications; efficiency of statistical quality control and proper sampling percentages for good inspection; wage scales for inspectors; selection of inspectors by promotion from the ranks or from the outside; physical and psychological attributes of good inspectors, such as eyesight and character serenity; advisability of classroom training for inspector personnel; preparation of standards to be used by inspectors in determining package quality. Much discussion was concerned with the need of proper inks to withstand sterilization required in drug packaging.

3. Development and Control of Packaging-Materials Specifications—Discussion Leader, R. H. RHODEHAMEL, Manager,

Merchandising Development and Control, Eli Lilly & Co. Panel: KENNETH MARVIN, Package Engineering Division, Eastman Kodak Co., and JOHN O. BROWNING, Package Engineer, Merck & Co.

Mr. Rhodehamel outlined the objectives of packaging material specifications as including (1) protection of product; (2) utility of container; (3) design and appearance; (4) workability of the package on the production line. In the Eli Lilly organization, he explained, the entire packaging responsibility comes under the jurisdiction of the Merchandise Development and Control Department. Packaging with them is a marketing function, but it subdivides itself in four separate units or aspects: (1) Structural design for protection; (2) materials control, which involves the inspection of incoming materials; (3) preparation and inclusion of promotion materials, package inserts, etc.; (4) printed packaging material.

Mr. Marvin described the Eastman Kodak Co.'s set-up as a dual-headed organization, one division under his own supervision being charged with package engineering problems and the development of specifications covering structure and protection; the other division being responsible for package design, including copy and nomenclature. This set-up has been in effect for something like two years (see MODERN PACKAGING, Oct., 1945, p. 91). He pointed out that although they manufacture 75 to 80% of their own package materials, they nevertheless face problems of control and specifications comparable to those present with other companies who buy from outside suppliers.

In answer to a question from the floor, Mr. Marvin stated that Eastman consumes over 100,000,000 cartons per year and that they use 3,000 different kinds and sizes of set-up boxes.

QUESTION: Who is responsible for determining the adequacy of a package for protection of a product?

ANSWER (Mr. Marvin): The supervisor of a department has the final responsibility. But it eventually reaches the package-engineering department. With a new system, anyone charged with the effectiveness of such a program has a continuing job of internal selling to do to insure complete inter-departmental cooperation.

QUESTION: How are instructions passed on to the various departments?

ANSWER: Mr. Rhodehamel stated that at the Lilly plant a written form is used. Mr. Browning said that at the Merck plant the package-engineering department supplies specifications to the production departments by means of job cards, coupled with a mimeograph-addressograph system, pointing out, however, that personal supervision of a constant and continuing character was essential to make sure that specifications were constantly being observed.

QUESTION: How much inspection of incoming packaging material can be left to the supplier?

ANSWER (from the floor): This involves another question as to whether the cost of such dual inspection is worthwhile in relation to the cost of the possible material spoilage. One member reported working out a friendly arrangement with suppliers whereby they sent a written complaint to the supplier, who could show it to his own workers in order to improve quality.

Sampling methods of inspection were discussed, but in spite of several requests for specific information from the floor as well as from the chair, no one apparently cared to go on record as to the percentage of sampling necessary to constitute an adequate inspection. Mr. Browning pointed out that it was not practical under present conditions to establish any standard percentage of defectives allowable and that rejections were sometimes utterly impractical because of insufficient inventory.

Mr. Joel Lund (Lambert Pharmacal Co.) called attention to the desirability of tests on the production line and described some practical plant precautions for determining and maintaining proper quality standards for packaging materials. A "must" is to establish a relationship of mutual responsibility between buyer and source and the need for finding out how much suppliers are doing—and why—in the way of inspection and control.

Mr. E. B. Dennis (Kimble Glass Co.) on behalf of the suppliers

appealed to the package users to give more complete specifications to their suppliers.

Mr. Rhodehamel asked for information regarding mechanical devices for inspection of cans or bottles. Mr. Marvin stated that his company is investigating a device developed by Owens-Illinois Glass Co., regarding which J. M. Wheaton of that company gave some information from the floor.

During the business meeting on Tuesday morning, Chairman J. D. Malcolmson, Robert Gair Co., reported for the *Advisory Council* and told members that according to Institute records about 185 inquiries had been handled in the last year. Mr. Malcolmson said, however, that he felt the distribution mechanism for handling inquiries had not been efficient and he expressed the hope that under the new executive director the Council would be able to function more effectively.

Chairman Herbert T. Holbrook, Standard Cap & Seal Corp., reporting for the *Standards and Practices Committee*, said the compilation of a glossary of definitions of common packaging terms was under way and it was hoped that this could soon be presented to the membership as a loose-leaf reference manual.

Chairman E. L. Hobson, Monsanto Chemical Co., reported that his *Technical Committee* had been re-organized and was working on final formulation of the 11 tentative Packaging Institute Standard Test Methods published by MODERN PACKAGING. Mr. Hobson also outlined a program for liaison with other technical organizations to avoid duplication and confusion.

As now organized, the Technical Committee includes, in addition to Chairman Hobson, a *Steering Group* composed of Roger V. Wilson, Continental Can Co.; Carl Hartman, St. Regis Paper Co.; Charles Kendall, E. R. Squibb & Sons; Robert de S. Couch, General Foods, and Carl Schaeffer, Stokes & Smith, and the following subdivisions:

General Committee: H. A. Barnby, Owens-Illinois; Walter T. Ritter, Chicago Carton Co.; A. B. Crowell, Jr., Union Paste; H. S. Van Vleet, American Can; E. C. Emanuel, Armstrong Cork; E. J. Weigand, Eastman Kodak; J. P. Sermattei, DuPont; J. M. Wheaton, Owens-Illinois; John Shields, Benj. C. Betner Co.; P. T. Callahan, Monsanto; L. L. McGrady, Eastman Kodak; T. W. Sharpe, Bakelite; Dr. J. H. Teeple, Celanese; John H. Cronos, W. C. Ritchie & Co.; John F. Halladay, American Coating Mills; Ralph C. Schilly, DuPont; Walter Byrd, Standard Brands; C. W. Hoffman, Riegel Paper; Thomas M. Hill, Aluminum Co. of America; Carl W. Brickman, Thos. M. Royal & Co.; Donald W. Davis, Marathon; Earl Nack, Sharp & Dohme; W. C. Wilson, Pyroxylin Products; John Yates, Pneumatic Scale; William Aiken, Goodyear, and F. C. Dulmage, Dow Chemical.

Liaison Representation: Coated & Processed Paper Assn.—Dr. Werner Kaufmann, Kupfer Bros.; Cotton-Textile Institute—J. A. Darnell, Johnson & Johnson; Fibre Box Assn.—J. C. Morris, Ohio Boxboard; Glass Container Mfrs. Institute—Mr. Barnby; Mfg. Chemists Assn.—Mr. Callahan; Shipping Container Institute—W. B. Lincoln, Inland Container; Textile Bag Mfrs. Assn.—R. V. Bradley, Chase Bag Co.; Society of the Plastics Industry—D. S. Plumb, Monsanto; Folding Paper Box Assn.—Mr. Ritter; National Canners Assn.—R. V. Wilson, Continental Can.

Test Methods Standardization and Coordination: Dr. Teeple, chairman; Mr. Hoffman.

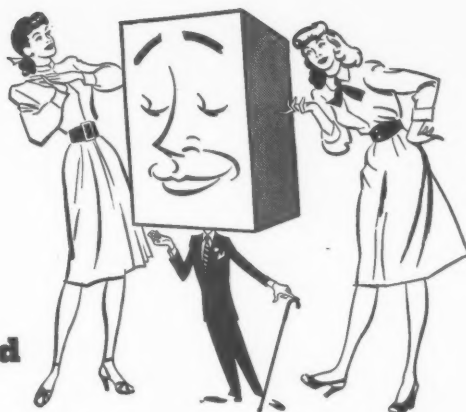
Compilation of Standard Test Method Information: Mr. Byrd, chairman; Clinton K. Royce, Navy Packaging Board, vice chairman; Mr. Shields; Paul J. Barcus, Owens-Illinois.

W. O. Brewer, Calco Chemical Division, American Cyanamid Co., was chairman of the Committee for the Ninth Annual Forum, assisted by E. B. Dennis, Jr., Kimble Glass Division, Owens-Illinois; Mr. Kendall, E. R. Squibb & Son; J. H. Maget, Merck & Co.; Mr. Schaeffer, Stokes & Smith, and Henry W. Stevens, Benj. C. Betner Co. Frank Greenwall, National Starch, was chairman of the Greeters' Committee, assisted by all past directors of the Institute.

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KIRK'S WHOLE WHEAT FLOUR

VIRGINIA SWEET PANCAKE FLOUR

CINCH CORN BREAD MIX

JEFFY PIE CRUST MIX

PILLSBURY SNO-SHEEN CAKE FLOUR

AIRY FAIRY COFFEE CAKE MIX

BALLARD'S PANCAKE FLOUR

PYEQUICK

AUNT JEMIMA PANCAKE MIX

PILLSBURY PANCAKE MIX

VELVET CAKE MIX

Yes—packaging can and does have a great deal to do with product popularity. Packaging that adequately protects the product yet makes its use easy, contributes a great deal to consumer satisfaction.

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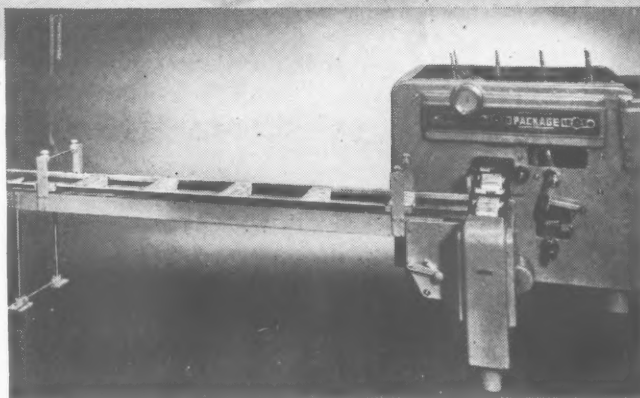
All of the different types of wraps shown above can be made on a single Universal Model 4. Crackers such as the saltines, square chocolate sandwiches and coconut cookies illustrated, can be wrapped without cardboard or trays. Other products, like the Rosettes and round crackers require trays.

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TECHNICAL

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Charles A. Southwick Jr. • Technical Editor

POWDER FILLING

Engineers have always been intrigued by the idea of packing fine powders by vacuum, but the road between that idea and its practical application has been long and rutted with difficulties. Only recently have scientists succeeded in using vacuum to solve the twin problems of packaging powdered products, dust and density control.

These problems, long recognized by packaging experts, arise from the inherent nature of the powder itself. In most fine powders, the individual particle is so small it is hard to visualize. To pass a 200-mesh screen, base of the screen series, the particle must be no more than 0.0029 in. in diameter and many particles are even smaller. As a result, these bodies are of such mass that their effective weight is largely counteracted by the frictional resistance of the atmosphere; the forces acting on them—gravitational pull and air resistance—are in equilibrium, permitting each particle to float in the air. This results in a phenomenon commonly called a dust condition, which ordinarily makes the filling of

**An explanation of the vacuum principle;
the advantages it has in the packaging
of powdered materials, free-flowing or
non-free-flowing.** by PAUL E. FISCHER*

containers with fine powder an extremely dusty operation.

Mathematically, the frictional resistance encountered by a free particle of matter as it falls in air is given by Stokes' Law:

$$F = 6\pi nrv \quad (1)$$

where F = frictional resistance in dynes

v = velocity of particles in cm./sec.

r = radius of particle in cm.

n = viscosity of air in c.g.s. units

* Chief Engineer, Mechanical Division, General Mills, Inc., Minneapolis.

Two graphs show variations in weight of a constant volume of powder on a packaging run. Greater variations of upper graph indicate that removal of air from powder is an essential to uniform packing of fine powders.

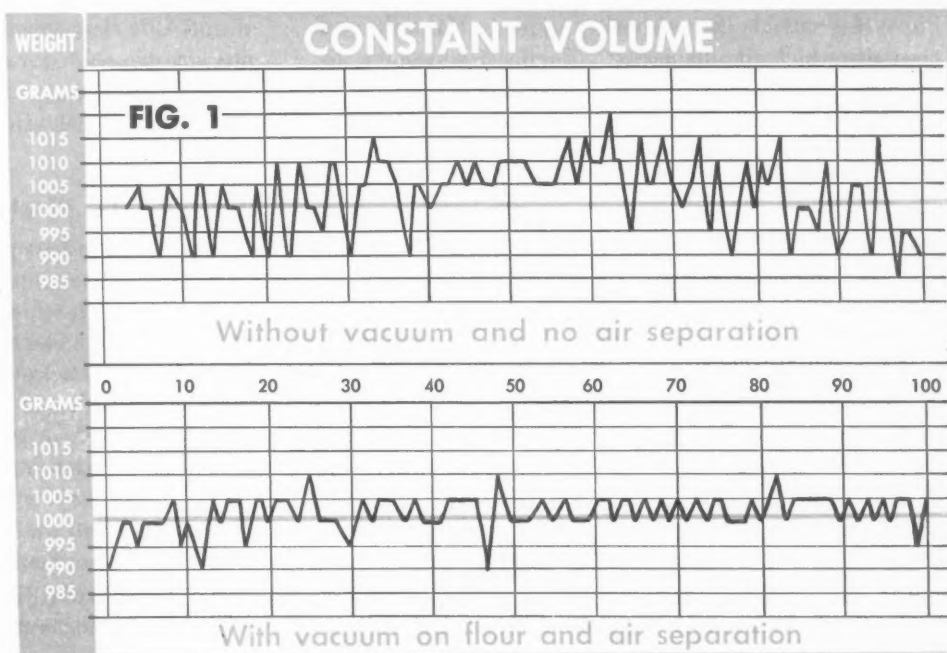
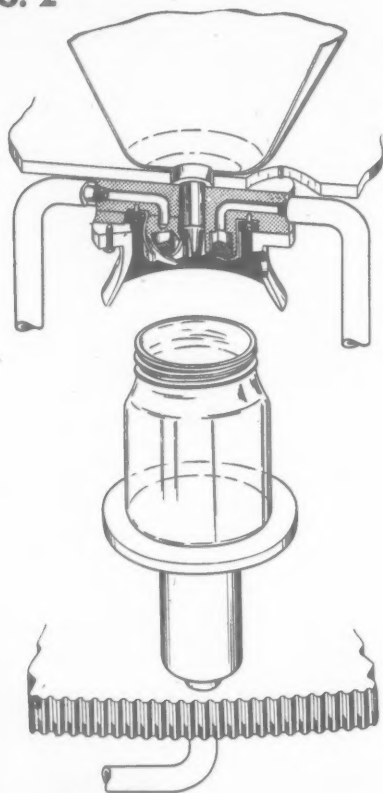
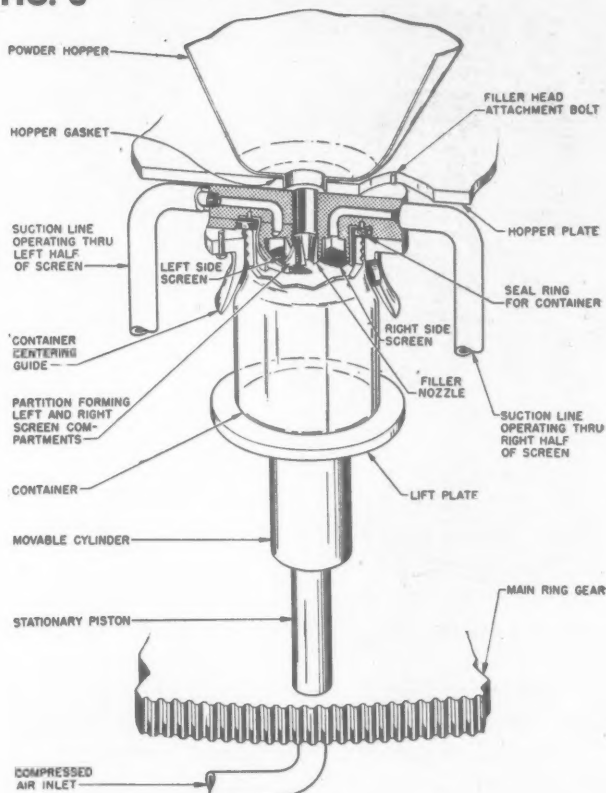


FIG. 2



Cross section through filling head of General Mills filler, showing nozzle and two screen sections through which air is removed from container. Glass jar is on pneumatic piston, ready to be elevated into rubber sealing hood for filling.

FIG. 3



Glass jar in filling position. Pressure conditions in each screen section are alternated during the filling cycle, allowing atmospheric pressure to force air back through the screens for brief intervals. Sudden in-rush of air clears adhering particles from the screen and "tamps" powder into the container.

The mass of a spherical particle is given by the formula:

$$M = \frac{4}{3}\pi r^3 w \quad (2)$$

where M = mass of particle in g.

w = density of particle in g./cu. cm.

Since the particle has buoyancy equal to the weight of the air which it displaces, its effective weight is:

$$W = r/3\pi r^3(w - w')g \quad (3)$$

where W = effective weight in dynes

w' = density of air in g./cu. cm.

g = acceleration due to gravity or

$g = 981 \text{ cm./sec.}^2$

The final velocity can be found by combining equations 1 and 2:

$$v = \frac{2r^2}{9} \frac{(w - w')}{(n)} \quad (4)$$

From Equation 4 it is apparent that the uniform velocity at which small particles fall varies directly as the density of the particle and the square of its radius and inversely as the viscosity of the air. In other words, the velocity can be increased only by increasing the size or density of the particle or by decreasing the viscosity of the air.

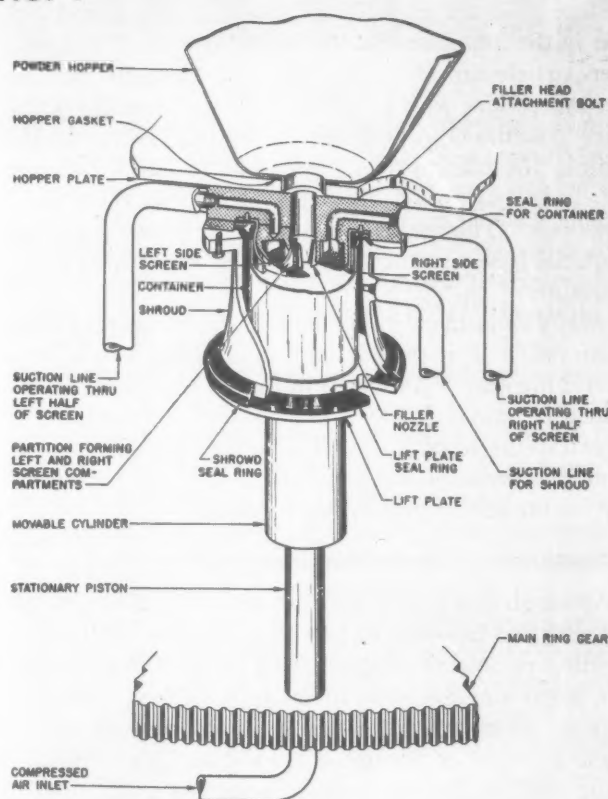
Since the particle characteristics of a commercial product are dictated by the requirements of the product itself, packaging engineers must concentrate on reducing air viscosity and they can do this consistently only by creating a measured, partial vacuum. The situation is the same as that of the familiar high-school physics demonstration in which a piece of lead and a feather of the same weight, dropped in a glass vacuum chamber, astonish students by both falling at the same speed.

Air must be displaced

However, the dust problem is complicated by the fact that the air in an empty container must be displaced by the powder with which the container is filled. As this air escapes, it carries with it a number of powder particles. Feeble attempts have been made to remove this air by such methods as inserting a small, copper tube through the top of the container and connecting the tube to a cylinder and piston, the stroke of this piston being synchronized with the filling cycle. This method, however, still left air in the containers during the filling operation; consequently, the suspended particles could be removed from the air stream only by gravity.

In many filling machines, this phase of the problem

FIG. 4



Where the container is apt to collapse under vacuum, a shroud is used to surround the container and vacuum is drawn both inside and outside of the container during the filling operation. This has the effect of equalizing pressure.

has been solved by using an auger screw to transfer powder from hopper to container. The auger is inserted into the container and the container then lowered at the filling rate of the auger. Although this method avoids any free fall of the powder and is universally applied, it is slow and machines which use it still require auxiliary scales to compensate for variations in the density (and therefore the weight) of a packaged powder product.

Problem of density control

Controlling the density (weight of a given volume) of a powder is made difficult by the affinity of powder particles for air. An air film surrounds each particle in a powder, locking into that powder an indeterminate quantity of air; the amount of this locked-in air varies greatly and unpredictably even within a single batch and the density of the powder varies accordingly. Without density control, then, the volume of a given weight of powder, or the weight of a given volume, is never uniform.

That established fact has brought a major problem to manufacturers of powdered products. The fine powders of the food industry, such as sugar, corn starch and flour, for example, are sold by guaranteed weights in

uniform containers, manufactured to accurate dimensions. Inconsistent density of the powder due to locked-in air causes many production difficulties in high-speed, automatic packing. When the powder contains too much air, the container will not hold the specified weight; and since package size is calculated to allow room for an average amount of air, the specified weight of a powder containing practically no air will not fill a container sufficiently to make possible a siftproof closure. This latter situation frequently arises when a powdered product rests in the bottom of a hopper over a week end.

The accompanying graph (Fig. 1) shows the variation in weight of a constant volume of powder on a packaging run. In these tests, conducted June 13, 1933, 1,000 grams of flour were packed in two seconds at an auger speed of 365 r.p.m.

The upper graph shows the weight variation which resulted when air was *not* removed from the flour, while the lower shows results of a similar series of runs in which air was removed before filling. Obviously, the upper graph indicates a far greater number of variations than the lower graph, showing conclusively that removal of air from a powder is essential to uniform, single-operation packing of fine powders.

It has been well said that the graveyard of powder-filling machines, both gravimetric and volumetric, has many tombstones. More than half a hundred processes for this ostensibly simple operation have failed either because they were too expensive or because they did not yield a uniform pack.

Vacuum filler as a solution

However, modern vacuum powder-packing equipment, such as the General Mills filler,¹ has succeeded in applying basic physical principles to the two basic problems: dust and density control.

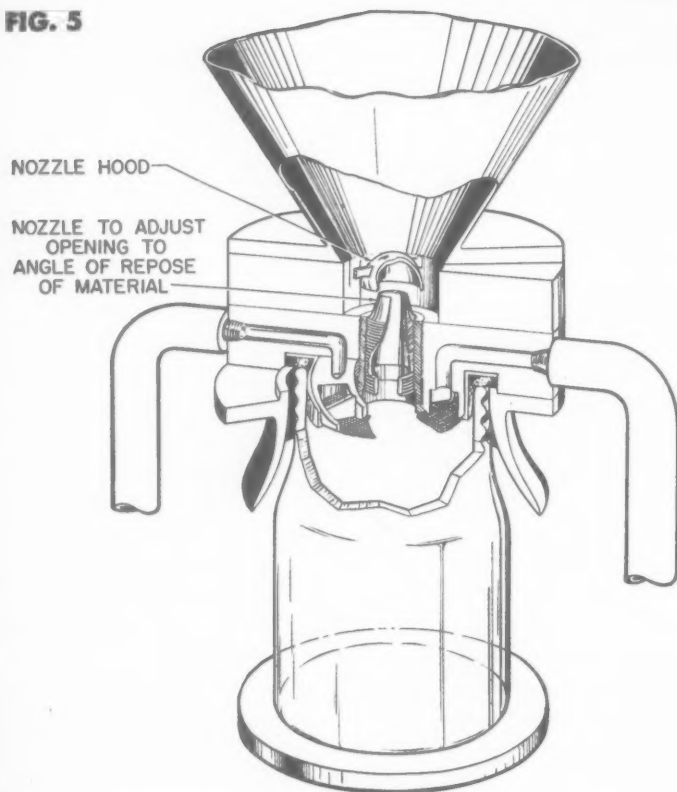
In a vacuum filler, the dust condition is eliminated by evacuating air from the container, thus removing the resisting effect of the relatively viscous air on the small, falling particles. Since the viscosity of the remaining air is negligible, each particle becomes essentially a freely falling body in an air-free chamber.

Powder is automatically brought from hopper to container by the very vacuum which eliminates air resistance on the individual particles. Since the air film around each particle in the hopper of such a filler is under atmospheric pressure, it constantly tries to expand into the partial vacuum of the container. But it cannot separate from the particle in the cramped quarters of the small hopper orifice. Consequently, it must carry the particle with it. Just how far up in the powder column this suction is effective has not been determined, but in actual operation the powder falls by even layers and the air film expands continuously as new layers are exposed.

This results in high-velocity discharge through the orifice and consequently in rapid filling. In fact, the velocity of the incoming powder is much greater than

¹ Formerly known as the Carter-Vac filling machine.

FIG. 5



This special filling head is used for non-free-flowing materials. It takes advantage of the angle of repose characteristic of all crushed or powdered materials and the filling nozzle is adjustable to the requirements of the product.

that permissible in handling liquids; a glass container filled with a liquid at the same velocity might well explode.

To achieve uniform weights, the density of the packed material must, of course, be controlled, but this control becomes simple when the amount of air left on the individual particle can be regulated. With a vacuum filler, this is done simply by maintaining the degree of vacuum at some pre-determined level.

Thus, the principles of vacuum filling are derived from well established laws of physics. The transposition of these laws into machinery resulted in the design of the General Mills filler as illustrated in Figs. 2, 3 and 4.

Fig. 2 is a cross-section through the filling head of the filler for non-free-flowing powders, showing the nozzle and two screen sections through which air is removed from the container.

Glass jar which has been placed on the platform top of a pneumatically operated piston, is ready to be fed into filling position, where a rubber hood will seal the gap

between the container opening and the hopper.

In Fig. 3 the glass jar is shown in filling position. Air in the container and the desired portion of the powder-particle air film are evacuated through the two screen sections with a regulated vacuum pump. Pressure conditions in each screen section are alternated during the filling cycle, allowing atmospheric pressure to force air back through the screens for brief intervals. This sudden in-rush of air clears adhering particles from the screen and "tamps" the powder in the container.

Many containers will collapse if air is removed from them while their outside surface is exposed to atmospheric pressure. As shown in Fig. 4, this type of container is placed inside a shroud and the vacuum is drawn in the shroud, as well as in the container, equalizing the pressure acting on the inside and outside of the container and preventing collapse.

Adaptation to free-flow materials

Although this type of filler was originally designed for use with non-free-flowing powders, it can be modified to handle free-flowing products such as granulated soaps, salt, sugar and chemicals in crystalline form. For this purpose, filling heads must be equipped with a hood to block the flow of powder when a container is not in filling position and no vacuum is applied to the nozzle opening.

A typical hood (as shown in Fig. 5) functions by taking advantage of the angle of repose which is characteristic of all crushed or powdered materials. This angle, usually defined as the maximum slope at which a heap of loose, solid material will stand without sliding, differs from one product to another. Consequently, the filling nozzle is made adjustable for different materials; otherwise, the machine is the same as those designed for non-free-flowing products.

During the filling operation, free-flowing powders are pulled up under the hood into the orifice of the filling nozzle. When a container is not in position and no vacuum is drawn, the powder is not subjected to a motivating force. Consequently, it rests on top of the hood and forms an angle of repose on each side of the nozzle, where it remains until operation is resumed.

This recent advance in vacuum-filler design is particularly valuable to the manufacturer of soap powder or of certain harmful chemicals. For many years, he has been plagued by an unusually serious dust condition and in many cases has hooded his volumetric-filling equipment with large suction heads to remove particles from the air. Now, with a vacuum filler for free-flowing powders, he can eliminate completely the dust condition, filling his materials in the same manner as he would non-free-flowing products of fine-particle size.

Plants which pack mixed products of non-free-flowing and free-flowing nature should also find a friend in this type of head, for it means they may fill all their products with one basic unit. The only variables required are different heads for the free-flowing and non-free-flowing materials.

COATINGS on KRAFT

The damage to material supplies caused by moisture and molds during World War II, particularly in tropical regions, was of considerable economic importance. Kraft paper was used as a case-lining material (5)¹ and as a packaging paper. Kraft paper is subject to deterioration when conditions of relative humidity (above 80%) and temperature are favorable for growth of molds.

The literature and number of patents on moisture-proofing papers are voluminous, while those for making paper both moisture resistant and mold resistant are few. Stanton and Henson (6) described the use of Saran latexes as a water-resistant coating for paper. Scribner and Abrams (5) investigated the extent of deterioration of, and the quantity of mold growth on, kraft paper coated with asphalt fractions. Lavers (2) and Lavers and Illman (3) tested the susceptibility to mold growth of untreated kraft paper and kraft coated with paraffin and microcrystalline waxes. However, a search of the literature did not disclose any studies on the mold resistance of kraft paper coated with solvent-type coating materials.

Purpose and method of study

A study was, therefore, undertaken to determine the moisture and mold resistance of solvent coating materials applied to kraft paper. It was found that it was necessary to incorporate a fungicide in the lacquers in order to make the coatings resistant to mold growth. Since solvent coatings had been used on electrical equipment to prevent current leakage caused by moisture and mold growth, some of these lacquers and varnishes were tried on the kraft paper. The effects of the coatings on the tearing resistance and bursting strength of the paper were also determined.

Sheets of No. 60 Golden kraft paper (Grade A, No. 1, 120 lb., 60 point, Fed. Spec. UU-P-268), 0.0063-in. thick, were used for all the tests. The coatings were applied to the paper by brush application.

Since kraft paper usually contains mold spores and it was desired to use pure culture methods, it was necessary to find a method of sterilizing the paper that would not change its physical properties. The two sterilizing methods tried were dry heat at a temperature of 150 deg. C. for 2 hrs. and moist heat under pressure (autoclaving) of 15 lbs. for 20 min. Physical tests on the paper were conducted according to TAPPI standards (7).

Table I shows that hot-air sterilization at 150 deg. C. decreased the average bursting strength value from 55 to 30 points. Moist-heat sterilization had very little effect on the bursting strength of the paper and this method of sterilization was used for the mold tests.

In order to determine the conditions under which

Tests indicate formulations that will increase fungus and moisture resistance and bursting strength, with lower tear resistance. by L. TEITELL and S. BERK*

molds will deteriorate the kraft paper, disks of the kraft paper, 88 mm. in diameter, were placed in 100-mm. Petri dishes containing either 5 ml. of distilled water or 5 ml. of a mineral-salts solution, Formula A of Great-house, *et al.* (1). Half of the kraft-paper samples were sterilized and half were unsterilized. The samples were inoculated with 1 ml. of spore suspensions of the following organisms, respectively: *Aspergillus niger* (S.W. Pacific isolate); *Penicillium* sp. (S.W. Pacific isolate); *Chaetomium globosum* 1042.4; *Myrothecium verrucaria* 1334.2 (formerly *Metarrhizium glutinosum*). The *Aspergillus* and *Penicillium* were used because of their ubiquitous occurrence as soil and aerial saprogyens. *Chaetomium* and *Myrothecium* were chosen as test organisms since they are cellulose decomposers and are commonly used in laboratory tests. The inoculated samples in the Petri dishes were incubated at ambient temperature and relative humidity above 90% for 30 days.

Results of test

The results of the test are shown in Table III. Accelerated mold growth was obtained in the mineral-salts solution as compared to mold growth in the distilled water. This reduced growth in distilled water would indicate that the kraft paper does not contain sufficient minerals to support good growth of molds and that, if the paper could be kept scrupulously clean, only a light growth of molds might occur. These results are concordant with the findings of Lavers (2) who showed that untreated kraft paper when inoculated with molds and stored in a cabinet operating at 35 deg. C. and 95 to 100% relative humidity for eight weeks would have only a slight amount of fungus growth.

However, the addition of dilute mineral-salts solution more closely approximates the sort of exposure that usually occurs in use, where nutrients are present on materials in the form of soil dust and detritus. In the tests on the coated paper disks, therefore, the mineral-salts substratum was used.

Fig. 1 shows the growth of *C. globosum* on sterilized kraft paper incubated in a mineral-salts solution. White areas in the dark-fruited clusters are regions where the mold destroyed the cellulose fibres. The black dots in the circular patches are sporulating bodies

* Chemists, Frankford Arsenal, Philadelphia.

¹ Figures in parentheses refer to "Literature Cited" appended.

TABLE I—EFFECT OF STERILIZATION ON BURSTING STRENGTH OF KRAFT PAPER
(Samples were conditioned for 48 hrs. at 23 deg. C. and 50% R. H.)

	Bursting strength	
	Range points	Average* points
Control	48/62	55
Steam sterilization (15 lbs. pressure for 20 min.)	52/65	58
Dry-heat sterilization (150 deg. C. for 2 hrs.)	26/36	30

* Average of 10 bursts.

TABLE II—EFFECT OF FUNGUS GROWTH ON BURSTING STRENGTH OF STERILIZED UNCOATED KRAFT PAPER AND PAPER COATED WITH NITROCELLULOSE LACQUER

(Incubated in a mineral-salts solution for 30 days)

Organism	Fungus growth*	Bursting strength values	Average bursting values
		(points)	(points)
Control	A None	55/53	54
	B None	53/60	57
<i>Myrothecium verrucaria</i>	A Heavy	8/0	4
	B Heavy	8/0	4
<i>Chaetomium globosum</i>	A Heavy	17/10	14
	B Slight	54/49	52
<i>Penicillium sp.</i>	A Heavy	10/5	8
	B Heavy	13/7	10
<i>Aspergillus niger</i>	A Heavy	10/0	5
	B Moderate	40/37	39

* A = Uncoated kraft paper. B = Kraft paper coated with nitrocellulose lacquer.

or perithecia. Areas of the paper around these fruiting bodies will crumble into fragments upon handling. Fig. 2 shows the growth of *M. verrucaria* upon unsterilized kraft paper incubated in the mineral-salts solution.

The paper disks that were incubated in the mineral salts were removed from the Petri dishes and allowed to air dry. The dry papers were washed in running water to remove the adhering mycelial mats. After air drying again, the samples were conditioned and the bursting strengths determined. Loss in bursting strength was used as the criterion for deterioration, since an important intended use for the moisture- and mold-resistant kraft paper was one in which the bursting-strength range was critical. Table II (samples marked A) show the effect of mold growth on the bursting strength of uncoated kraft paper. Samples that fell apart upon removal from the Petri dishes were given a bursting strength value of zero. The loss in bursting strength was roughly proportional to the amount of mold growth. Scribner and Abrams (5) exposed kraft paper in a cycled tropical room and found that the loss in tearing resistance was related to the amount of mold growth and to the presence or absence of the organisms *C. globosum* and *Penicillium sp.*

Paper disks treated with the solvent-type coatings were given the same 30-day mold test described above for untreated kraft paper. The coatings used were:

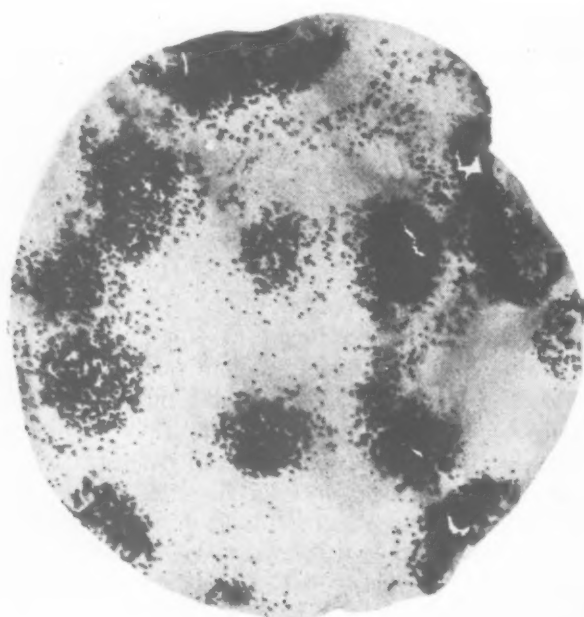
Nitrocellulose lacquer without a fungicide

Nitrocellulose lacquer containing 5% pentachlorophenol

Nitrocellulose lacquer containing 5% salicylanilide

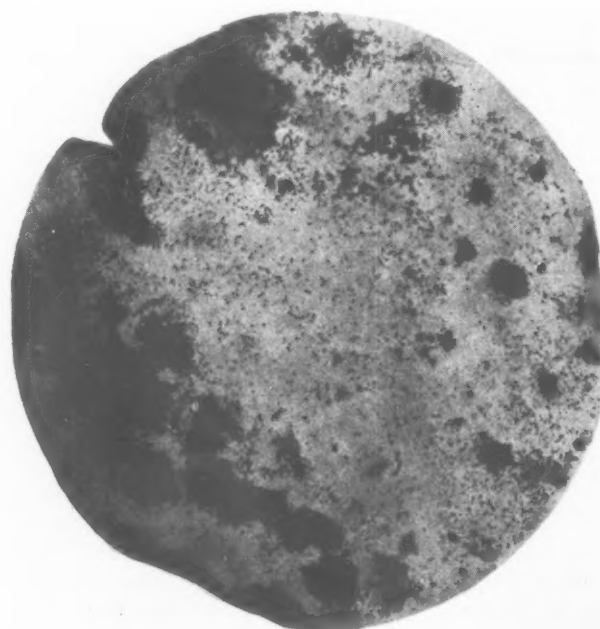
Oil-modified para-phenyl phenol-formaldehyde var-

STERILIZED KRAFT



1. Growth of the *Chaetomium globosum* on sterilized kraft paper incubated in a mineral-salts solution.

UNSTERILIZED KRAFT



2. Growth of *Myrothecium verrucaria* on unsterilized kraft paper incubated in a mineral-salts solution.

TABLE III—AMOUNT OF FUNGUS GROWTH ON KRAFT PAPER INOCULATED WITH FOUR SPECIES OF FUNGI
(Incubated for 30 days in mineral-salts solution and in distilled water at ambient temperature)

Substrate	Treatments†	Test organisms*			
		<i>Aspergillus niger</i>	<i>Penicillium sp.</i>	<i>Chaetomium globosum</i>	<i>Myrothecium verrucaria</i>
Mineral salts	S	++++	++++	++++	++++
	U	++++‡	++++‡	++++‡	++++‡
Distilled water	S	+++	—	++	—
	U	—	—	++‡	++‡

† S = Sterilized. U = Unsterilized.

* Code for fungus growth: — = no growth. ++ = slight growth. +++ = moderate growth. ++++ = heavy growth.

‡ Growth on unsterilized specimens due primarily to contaminant molds.

TABLE IV—MOLD GROWTH ON KRAFT PAPER TREATED WITH COATING MATERIALS
(After 30 days incubation in mineral-salts solution at ambient temperature)

Coating material	Solids %	Treatment†	Test organizations*			
			<i>Aspergillus niger</i>	<i>Penicillium sp.</i>	<i>Chaetomium globosum</i>	<i>Myrothecium verrucaria</i>
1. Uncoated control	..	S	++++	++++	++++	++++
		U	++++‡	++++‡	++++‡	++++‡
2. Nitrocellulose lacquer	24	S	+++	++++	++	++++
		U	++++‡	++++‡	++++‡	++++‡
+5% Pentachlorophenol	25.2	S	++	+++	—	—
		U	—	—	++‡	—
+5% Salicylanilide	25.2	S	—	+++	—	—
		U	—	+	—	—
3. Para-phenyl phenol-formaldehyde varnish	50	S	—	++	—	—
		U	++‡	++++‡	++‡	++‡
+5% Pentachlorophenol	52.5	S	—	++	—	—
		U	—	‡	—	++‡
4. Saran lacquer	20	S	++++	++++	++++	++++
		U	++++‡	++++‡	++++‡	++++‡

* Code for fungus growth: — = no growth. + = trace of growth. ++ = slight growth. +++ = moderate growth. ++++ = heavy growth.

† S = Sterilized. U = Unsterilized.

‡ Growth on unsterilized specimens due primarily to contaminant molds.

nish without a fungicide

Oil-modified para-phenyl phenol-formaldehyde varnish containing 5% pentachlorophenol

Saran lacquer (polyvinylidene chloride)

The results of the test are shown in Table IV. Nitrocellulose lacquer by itself produced a very slight reduction in the amount of mold growth. The addition of fungicides to the lacquer markedly reduced the susceptibility of the paper to the mold growth. As shown in Table II, where the plain lacquer reduced the amount of mold growth in the cases of inoculation with *A. niger* and *C. globosum*, there was only a slight lowering of the bursting strength of the paper.

Paper coated with the para-phenyl phenol-formaldehyde varnish had fair mold resistance, which is somewhat increased by the addition of pentachlorophenol, particularly in the case of the *Penicillium*.

The moisture resistances imparted to the kraft paper by the coatings are reported in Table V. The water-vapor transmission rates were measured at the end of 68 hrs. in a Southwick-General Foods cabinet. The phenol-formaldehyde varnish greatly increased the moisture resistance of the paper and the addition of the fungicide to the varnish did not reduce the moisture resistance.

The effects of the coatings on the bursting strength and the tearing resistance (Continued on page 202)

TABLE V—WATER-VAPOR TRANSMISSION RATES OF KRAFT TREATED WITH A NUMBER OF COATINGS
(Coated papers were kept 68 hrs. in cabinet)

Coating material	Thickness in.	WVTR
		(gm./100 in. ² /24 hrs.) average*
Uncoated	0.0063	129
Nitrocellulose lacquer	0.0065	146
+ 5% Pentachlorophenol	0.0066	124
+ 5% Salicylanilide	0.0065	137
Para-phenyl phenol-formaldehyde varnish	0.0069	26
+ 5% Pentachlorophenol	0.0067	23
Saran lacquer	0.0064	32

* Average of two samples.

TABLE VI—BURSTING STRENGTH AND INTERNAL TEARING RESISTANCE OF KRAFT PAPER TREATED WITH COATING MATERIALS

Coating material	Bursting strength		Tearing resistance	
	Range* points	Average* points	Range* grams	Average* grams
Uncoated	41/47	45	36/42	38
Nitrocellulose lacquer	63/71	67	25/35	30
5% Pentachlorophenol	62/74	68	29/36	34
5% Salicylanilide	60/77	70	25/37	32
Para-phenyl phenol-formaldehyde varnish	81/97	89	21/25	23
5% Pentachlorophenol	65/90	83	19/28	22
Saran lacquer	60/82	72	27/31	29

* Ten samples were used.

Questions and Answers

This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 122 East 42nd St., New York 17, N. Y. Your name or other identification will not appear with any published answer.

Protective packaging of bon-bons

QUESTION: *We are manufacturers of a large sized set-up paper box which is being used for the packaging of bon-bons. The user of this box tells us that he has been experiencing crystallization of the product in shipments to the West Coast and has requested that we improve the package to prevent this occurrence. Can you suggest means by which we can improve the protective qualities of this package?*

ANSWER: Your customer should first tell you if the bon-bons are being crystallized as a result of the higher temperatures and longer periods of storage in shipment which West Coast shipments undergo. If the product failure is the result of temperature, there is nothing which you can do to improve the package to prevent its occurrence.

If bon-bons are being crystallized as a result of gain or loss of moisture, however, there are many ways by which a package can be changed to prevent this type of product deterioration.

The simplest means of product protection would be to overwrap the finished packages which are going to the West Coast with a moistureproof cellophane. A few sample shipments so overwrapped would prove the effectiveness of the idea. If the shipments are not too large, hand wrapping would be a practical means of performing this operation.

Waterproof papers and bags

QUESTION: *We are engaged in sales-promotion work and one of our clients is interested in various kinds of treated papers. Are there any waterproof papers, as opposed to those which are merely moistureproof or water resistant which can be made into bags?*

ANSWER: There are a large number of paper structures which come under the general heading of waterproof papers. These structures in general can be defined as having resistance to the passage of liquid water. These must be differentiated from moistureproof papers, which will have varying degrees of resistance to the passage of water in the vapor phase. The term "water resistant" is very broad and very difficult to define clearly. It would include papers having surface treatment giving them water repellancy, which is useful for some applications but would not have true water-

proofness or water-vapor protection. There is one other type of paper which is sometimes confused with those you mention and that is paper having wet strength. This group may be defined as papers which maintain a high level of physical properties after complete saturation by liquid water. All of the papers described can be made into various types of containers, including bags.

Approved materials for food packaging

QUESTION: *It is our understanding that one of the government bureaus has published an approved list of plastics and packaging materials which can be used in contact with various foods, particularly with meat products. Can you tell us whether this is true and, if so, where we can obtain a copy of such an approved list?*

ANSWER: A list of government-approved plastics and packaging materials for use in direct contact with foods has never been published to our knowledge. When your question was received, however, we checked with various government agencies to reaffirm that no such approved list is available or contemplated.

The following is a direct quotation from the Bureau of Animal Industry of the U. S. Dept. of Agriculture:

"We have issued no list of plastic materials considered unsuitable for use in direct contact with meat products. We have, however, required that manufacturers offering plastic materials for use in direct contact with federally-inspected products furnish this office with analytical data showing the amount of material that is extracted from the plastic when in contact with animal and vegetable fats and with slightly alkaline, neutral and slightly acid aqueous solutions for various periods of time at various temperatures. If appreciable material is extracted by these solvents, it is required that evidence be presented, based on long-term animal feeding experiments, that such extractable ingredients are non-toxic at levels several times those which could possibly be obtained from the product by the consumer."

This indicates, in other words, that you should submit either to the Bureau of Animal Industry or some other appropriate governmental bureau a statement of the combinations of materials you intend to use, together with analytical data of the type indicated above, to substantiate the fact that the proposed packaging material is nontoxic.

Protective



Protective packaging for pharmaceuticals and drugs not only protects the product itself — but the valued name of the maker as well. Protecting the name of the maker is a matter of correct package design — the **right** combination to guarantee repeat sales — and **new** sales — to extend market position.

Such is packaging at Warnercraft . . . where Warnercraftsmen — backed by experience, facilities, and research — take a product and design a container that **FITS** — and continues to **FIT** — for sales in a competitive market.

Investigate Warnercraft for better pharmaceutical and drug packaging today!

WARNERCRAFT
 "THE FINEST WORD IN PACKAGING"

THE WARNER BROTHERS COMPANY

Makers of set-up and folding boxes of all types, transparent acetate containers, hand made specialties, counter displays and dispensers.
 Main Office and Factory: 325 Lafayette Street, Bridgeport 1, Conn. • New York Sales Office: 200 Madison Avenue, New York 16, N. Y.

DECEMBER 1947

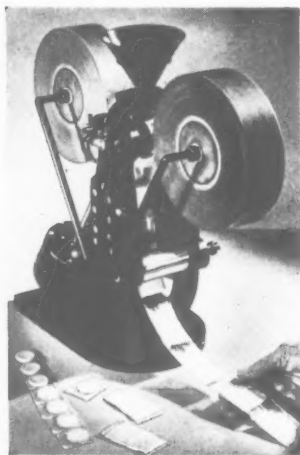
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Equipment and Materials

NEW UNIT-PACKAGING MACHINE

A compact, new high-speed machine for the unit packaging of tablets, powders or liquids has been developed by Stroop Associates, New York. This versatile small machine



(about 20 by 15 by 15 in.) involves an unusual patented process for forming the package and filling at the same time. The operation is rotary and continuous. The machine can be adjusted to discharge a single unit or any multiple or continuous strips. Size changes are made by the interchange of two easily removed rotors. The machine will handle all types of heat-sealable materials whether single ply or laminated, metal foil, coated paper or plastic film. While the present model

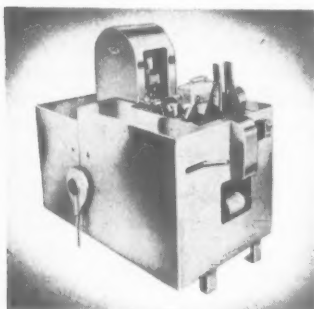
is designed for tablets and single-use quantities, the principle can be applied to packages of any width or length.

POLYETHYLENE PRICE CUT

Bakelite Corp., Unit of Carbide & Carbon Corp., New York, announces a reduction in prices of its polyethylene, as of Nov. 10, in a range from four to seven cents per pound for various grades.

CARTON SET-UP MACHINE

A high-speed machine for automatically setting up multi-sized cartons is now in production by Frank D. Palmer, Inc., Chicago. Using



blanks of any standard size, this machine will set up and glue 155 complete cartons per minute in many sizes, the maker states. Blanks are continuously fed and delivered at speeds adjusted to specific requirements. Any type of glued carton made from standard blanks, with

plain sides, turned over flaps, attached covers or a combination can be handled.

SMALL, HIGH-SPEED PRESS

B. Verner & Co., New York, is offering a compact, small unit designed to maintain a standard speed of 6,500 impressions per hour, for envelope and carton printing, imprinting and specialty printing in the packager's plant. Designed and constructed on the cylinder and flat-bed principle, the "Multipress" eliminates the need for

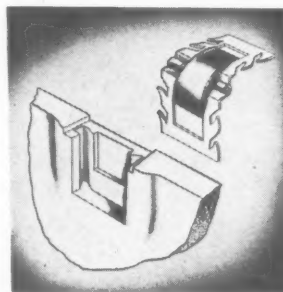
costly curved plates and specialized trained operators and makes profitable imprinting of small-lot orders, it is said.

WATERPROOF ADHESIVES

E. I. du Pont de Nemours & Co., Wilmington, Del., announces that the waterproof adhesives developed by their Grasselli Chemicals Dept. in 1943 for wartime usage are now available in limited quantities for industrial use. Designated as "77" and "78," these adhesives, formulated for use in paper boxes, are said to have withstood submersion and pounding of the surf for at least 24 hrs.

SPRING CLIP STEEL HINGE FOR PLASTIC BOX

A steel hinge which incorporates a spring clip to provide snap action to the lids of plastic packages has been developed by the General Electric

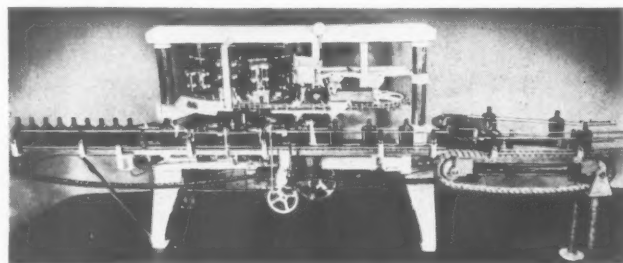


Plastics Division. The new device, designed with teeth that bite into slots molded in both cover and base of the box, is said to simplify assembling operations and eliminate the use of screws and rivets. The hinge concentrates all the spring tension on the metal itself, thus relieving the strain on the

plastic and providing a stronger assembly.

IMPROVED STRIP-STAMP MACHINE

Wright's Automatic Machinery Co., Durham, N. C., announces it is now in production on an improved machine for automatically affixing revenue strip stamps to pint and half-pint liquor bottles at a rate of 40 to 120 per min-



ute. Tested under actual operating conditions in a plant of a leading bottler, the manufacturer reports the improvements resulted in greater efficiency, with only one attendant. Photo shows machine with guards removed.

PHOTO-ELECTRIC SCANNER

Langevin Mfg. Corp., New York, announces a new photo-electric scanner, Model SC-301, intended for use on automatic machinery for the precise control of registration in printing, packaging, wrapping or cutting. By a simple

ROSS

CARTONING MACHINES are *Death on Downtime*

Ross cartoning machines can and do work 'round the clock—without the profit-eating penalty of excessive downtime while converting from one size cartoning operation to another.

For in the Ross design there are no parts to remove and replace when making a changeover. It's done by adjusting movable units that are permanently built into the machine bed. Adjustments for carton size are made against numbered scales guided by calibration charts supplied with each machine. Any semi-skilled operator can make the changeover in a few minutes time. The convenience, simplicity and flexibility of the Ross dial control method means money to you. It is an exclusive, patented feature.

Now's the time to get acquainted with the Ross way . . . the new and better way to mechanically handle all cartoning operations. *Use the coupon.*



**ROSS CARTONING
MACHINE**

Ross cartoning machines are made in both semi-automatic and fully automatic types.

*Quickly adjust from
one size carton to another...
as easy as
dialing your radio!*



Operator demonstrates the ease of effecting a change-over by simply resetting the position of dial controlled units on the machine bed.

A. H. ROSS COMPANY, Inc.

PACKAGING MACHINERY

Subsidiary of Rockwell Manufacturing Company

P. O. Box 998 · Dayton 1, Ohio



Send this coupon today!

A. H. ROSS COMPANY, INC.
Box 998, Dayton 1, Ohio

Gentlemen:

Please send me without obligation your catalog and complete engineering and performance data on Ross cartoning machines.

COMPANY _____

STREET _____

CITY _____ ZONE _____ STATE _____

YOUR NAME _____

B-4



If you want
a "see-through"
package



Customers like to see what they're buying and they go for products packaged in LUSTEROID.

These crystal-clear vials and tubes are strong, rigid and unbreakable, yet provide perfect product visibility while protecting the contents in transit, in stock and in use.

LUSTEROID comes in all colors of the rainbow—clear or opaque. Its light weight saves money in handling and shipping. Its printability cuts labeling costs since the sales message can be made an integral part of the package.

Sizes from 1/4" to 1 1/4" in diameter, lengths up to 6". Cork, slip-on and screw-cap closures. Write for full details.

LUSTEROID CONTAINER CO., Inc.

Formerly Lusteroid Division of Sillicocks-Miller Company

Office and Factory

10 W. PARKER AVENUE, MAPLEWOOD, N. J.
MAILING ADDRESS: SOUTH ORANGE, N. J.

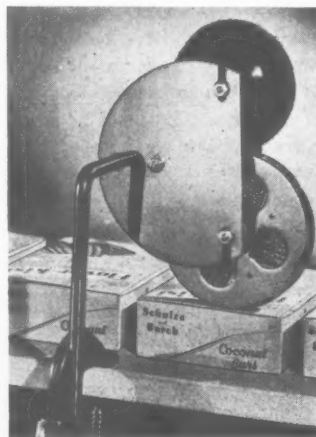
Equipment and Materials

(Continued)

pivot arrangement, the photo-tube portion of this unit can be adjusted for use with either transmitted or reflected light, making the scanner adaptable for the control of registration of both opaque and transparent materials, flat or curved.

CODE DATING MACHINE

An automatic package-marking device, which features a newly developed numbering wheel and inking roller, is available from Acro Tool & Die Works, Chicago. The



printing numbers and letters are mounted on a series of variable adjustable reels, similar to standard adjustable office stamps, and these variable reels are an integral part of the numbering-wheel disk. This makes possible a complete range of letters and numerals which can be quickly set to any desired printing combination. Changes in date or code are made simply and easily without the need of dismantling and resetting the

imprint. The device may be attached to a conveyor, wrapping machine, carton-forming machine, etc., and can be operated vertically, horizontally or upside down.

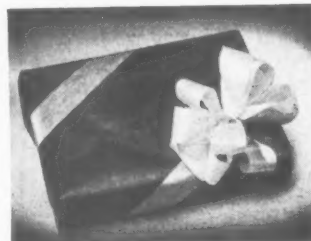
STEEL STITCHER FOR CARTON BOTTOMS

A giant steel stitcher for the bottoms of cartons with excessive heights and widths is available from The Heller Co., Cleveland. Foot-operated, it drives staples into large carton bottoms in 1/3 the time required to seal them with glue, silicate or tape, the makers claim.

ROTOGRAVURE PACKAGE PRINTER

Champlain Co., Inc., Bloomfield, N. J., is offering its V-Model package printer for printing up to four colors in one operation on all commonly used stock. It is said to produce roll labels of cellophane, paper, glassine or foil for wrapping candy, gum, cigars and other items at little more cost than that of plain wrappers. Plain stock travels from the roll on this press through one or more narrow rotogravure units, as desired. The finished wrapper, printed with fast-drying inks, is re-rolled, dry and ready for use. Skilled operators are not needed.

NON-WOVEN TEXTILE FOR DECORATIVE PACKAGES



"Rayonese," a non-woven, 100% rayon fabric, is offered by Crown-Mark Paper Corp., New York, in three different types for decorative uses as low-cost box coverings, ribbons, box liners, etc. This material lends itself well to

Kodak

THE OUTSTANDING THING about an individual "showcase" made of Kodapak Sheet is the product that's presented in it—this pipe, for example.

Kodapak Sheet invites inspection of every detail of the product. Yet this sparkling, optically clear, durable packaging keeps the product new, clean, and safe—well protected from the store wear and unnecessary fingering that so frequently interfere seriously with a product's salability.

Kodapak Sheet is supplied in two forms:

Kodapak I, cellulose acetate, in gauges from No. 88 (0.00088") to 20 thousandths (0.020"); Kodapak II, cellulose acetate butyrate, in gauges from No. 90 (0.00090") to No. 200 (0.00200").

If you want to learn more about this versatile material, the Kodapak Demonstration Laboratory in Rochester is available to demonstrate fabrication possibilities and uses. Write for an appointment.

CELLULOSE PRODUCTS DIVISION
EASTMAN KODAK COMPANY, ROCHESTER 4, N. Y.

Right in sight... in **Kodapak Sheet**



Kodapak Sheet . . . FOR THE DISPLAY YOU WANT . . . THE PROTECTION YOU NEED

T. M. Kodapak Reg. U. S. Pat. Off.

OPTI-CHEK

WILL CUT REGISTRATION TIME!

The simple fool-proof operation of the OPTI-CHEK will cut your registration time in half and eliminate idle presses . . . for color registering is done *off* the press and once your plates are in printing position the job is ready to run with no further adjustments necessary. Two OPTI-CHEK models are available—Model F for use with flat-bed presses and Model R for use with rotary presses.

ALSO SEE US FOR the very latest Cottrell-Heinrich press for printing in aniline, gravure or letterpress . . . in any order or combination.

H. H. HEINRICH CO.

200 VARICK STREET
NEW YORK 14, N. Y.

Write for folder on either Model OPTI-CHEK or for further information on the Cottrell-Heinrich press.

MAKE BAGS FAST



Up to 10,000 Per Hour

- Fast changeover time
- For small and large quantities
- Low operating cost

The "Chieftain"—new Modern Clipper machine—represents a brand-new design in bag-making machines. It makes flat and square bags of all heat-sealing materials; cellophane, Pliofilm, foil and plastics—with a speed and efficiency never before equalled. No skilled operator is needed. Easy to operate, precise and economical. Has center seam gluing and duplex bag making attachments.

HEAT SEALS

Because a proper heat-seal keeps out and keeps in all atmosphere, it gives you *certain* sift-proofing and leak-proofing. There is no seal that can compare with a heat-seal for protection . . . no machine that can rival the "Chieftain" for versatility and high-speed operation.

MODERN CONTAINERS CO.

3220 E. Olympic Blvd.

Los Angeles 23, Calif.

Equipment and Materials

(Continued)

printing by letterpress, textile and paper roll printing, the company states. Two types are pliable and suitable as liners in boxes for such items as pens, watches, cutlery, etc., as well as window-display materials where draped backgrounds are desired. A third type, it is said, is suitable for lamination to 10- or 15-pt. board for producing unusual containers for perfumes, cosmetics or any other product where a textural finish is desirable. Photograph shows boxes wrapped and ribbon-tied with this material.

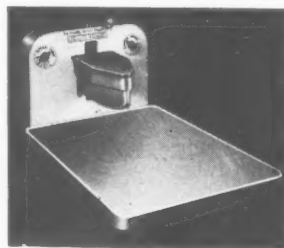
DEVICE FOR SEPARATING COLORS

Dayton Rubber Co., Dayton, Ohio, is offering a mechanical device which enables the printer to run two or more colors simultaneously without cutting the rollers for split color runs. Known as the Dayco color separator, this unit is said to work with any type of roller, mounted on the press shaft where it picks up ink from the rider rollers and automatically cleans all other rollers back to the ink fountain. Each unit comes ready to install and includes the basic assembly, one each 1 1/4- and 1 1/2-in. wide unit roller, ink pan, two sets of shims and an Allen wrench. Installation on the press shaft is said to be quickly effected.



CELLOPHANE HEAT SEALER

A new heat sealer for packages hand wrapped in cellophane has been developed by the Food Packaging Division of Charles F. Hubbs & Co., New York. This unit, known as the Cell-O-Sealer, is said to minimize the handling operations necessary to seal most hand-wrapped packages and increase speeds up to 100%. The sealer is adjustable to a wide range of types and sizes of packages, it is said.



SYNTHETIC LACE FOR GLAMOUR PACKAGES

Mistlon lace, a new synthetic fibre material which may be used as a decorative wrapping or trim, is now available in commercial quantities from its producer, Minnesota Mining & Mfg. Co., St. Paul, Minn. Offered in 11 colors, the lace can also be produced to match any other color, on request. It can be heat sealed to itself or to other thermoplastics, is waterproof, flame resistant, won't run or ravel, and retains indefinitely an unusual perky crispness, the makers claim.



MODERN PACKAGING



Hinds

sets its cap . . .

for more business!

A new and strikingly beautiful package has appeared on cosmetic counters—bearing one of the oldest and most successful names in its field. Notice the cap.

Does it “make” the package? Certainly it *helps*! Besides providing a tasteless, odorless, non-toxic, non-leaking closure, **BAKELITE** Styrene plastic lends its own natural, inherent beauty to an already beautiful and eye-winning design. The rich coral color, the smooth sheen, the rich “feel” of this fine plastic cap add much to the package.

Package designers are invited to “go the limit” with **BAKELITE** Styrene plastics. They offer so much! Unlimited color effects—or crystal clarity. Easy molding, in intricate or simple shapes. Rigid strength to resist shipping damage. And *low cost*.

Write Department 63 for further details on one of the most versatile of plastics for product and package styling!



Closure molded by
Mack Molding Co.



TRADE-MARKS

BAKELITE
Styrene
PLASTICS

BAKELITE CORPORATION, Unit of Union Carbide and Carbon Corporation UCC 30 East 42nd Street, New York 17, N. Y.



Plants and People

Max M. Kipfer is the newly elected president of **Aluminum Seal Co.**, a wholly owned subsidiary of **Aluminum Co. of America**, succeeding the late **John E. Sharp**. Mr. Kipfer will make his headquarters at the new company location at Richmond, Ind. He has been affiliated with the Aluminum Seal Co. 23 years.

Aluminum Co. of America announces a change in location of its Cincinnati district sales office to 801 Enquirer Bldg, Cincinnati 2, Ohio.

Col. Evan E. Kimble and **Eugene L. R. Laning** were guests of honor at a banquet recently in Atlantic City in recognition of their 50 years of service with **Kimble Glass**, now



E. E. Kimble E. L. R. Laning

a division of **Owens-Illinois**. Col. Kimble, founder of the Kimble Glass Co., and Mr. Laning, treasurer of Kimble since 1924, each received Owens-Illinois' highest service award. Both Col. Kimble and Mr.

Laning continue to be active in the affairs of Kimble Glass.

Owens-Illinois Glass Co., Toledo, announces the following new appointments in its **Closure and Plastics Division**: **M. S. Carr** to the position of divisional purchasing agent; **Peter J. Murphy** of Glassboro, N. J., and **George H. O'Donnell** of Toledo to assistant division managers.

Owens-Illinois has organized a **Brewery Sales Division** under the management of **Lawrence N. Crossley** and a **Carbonated Beverage Division** under management of **Joseph M. Coghlin**. **R. E. Delaplane**, sales manager to the **Beverage Industries Divisions**, will be assisted by **Jerome Curran** in the over-all administration of these newly formed divisions.

American Coating Mills, Division of Owens-Illinois, announces that its production facilities have been doubled by the addition of three new carton plants and a new paperboard mill: the mill and a carton plant at Elkhart, Ind., a carton plant at Chicago and a carton plant of **Modern Packages, Inc.**, Memphis, Tenn., an affiliated company.



H. F. Lochrie

General Foods Corp., New York, announces the promotion of **Howard F. Lochrie**, former advertising and promotion manager of the **Birds Eye-Snyder Division**, to director of marketing with responsibilities for all advertising, market research and sales promotion for the division. **Emerson H. McWhorter** has become manager of market research, **Luther V. Haggerty** manager of advertising and **Edward Tabibian** manager of

sales promotion.

The Connecticut Chemical Research Corp., Bridgeport,

Conn., has been organized to serve as a private-brand packer and contract filler of low-pressure aerosols, with the following officers: **Lawrence Valenstein**, president; **E. F. Helfer**, vice president in charge of production and product engineering; **H. R. Shepherd**, vice president in charge of research and contract sales. Mr. Helfer and Mr. Shepherd were formerly with the **Aerosol Division** of **Bridgeport Brass Co.** Mr. Valenstein is president of the **Grey Advertising Agency**, New York.

Several changes to the home-office personnel of **The Gummed Products Co.**, Troy, Ohio, have been announced. The enlarged **Gummed Paper Tape Department** is to be in charge of **Robert E. Hoefflin**, former treasurer of **Waco Aircraft Co.** Mr. Hoefflin will be assisted by **George E. Miller**. The **Flat Gummed Paper Department** will be in charge of **Willis R. Haase**, formerly Columbus district sales manager for the company, assisted by **Robert N. Graham**, who was previously with the **Champion Paper & Fibre Co.** The expanded **Order Department** will be under the direction of **Philip W. Faulkner**.

Roy Johnson has been elected president of the **Arenco Machine Co., Inc.**, manufacturers of filling machines, succeeding **F. Atterberg**, who resigned.

A new **Continental Can Co.** paper-covering plant for the manufacture of fibre shipping drums is under construction in Tonawanda, N. Y., and is expected to be in production by August 1948. This will be the third Continental plant devoted to fibre drums, the other two being operated by **The Container Co.**, a subsidiary.

The Ohio Boxboard Co., Rittman, Ohio, announces the election of **B. M. Thomas** as vice president in charge of production. Mr. Thomas came to Ohio Boxboard Co. in 1946 from the **American Coating Mills**, Elkhart, Ind., where he had been vice president and plant manager for six years. **Marc Shofer**, formerly vice president of the **Iowa Fibre Box Co.**, has joined the company as sales manager of the **Container Division**.

Ronald H. Dallas has been appointed sales manager of **Maywood Glass Co.** and the **Pacific Coast Closure Division** of **Anchor Hocking Glass Corp.**, located at 3322 Wilshire Blvd., Los Angeles.


Avery Adhesive Label Corp. of Los Angeles, is constructing a new factory and office building in Monrovia, Calif. Upon completion of the plant about the first of the year the manufacturing operations presently carried on in Los Angeles and Pasadena will be combined in Monrovia.

Charles R. Stevens, Toledo, inventor and developer of the **Morrow-Stevens** paper-wrapping and sealing machine, announces that he has acquired the entire assets of the **Morrow-Stevens Division** of the **Morrow Mfg. Co.**, Wellston, Ohio, and is re-establishing this business.

The merger of the **Lynch Corp.**, Anderson, Ind., and its wholly owned subsidiaries, the **Lynch Package Machinery Corp.**, **Lynch Mfg. Corp.**, **Wiley & Lett, Inc.**, and The

as seen in **TIME**

... **THRIFTY PROTECTION FOR "A PRODUCT OF GENERAL FOODS"** ...



Here's a tough, low-cost Betner bag that gets America's largest-selling dog food to the dog in "factory-shape". And it gives big, colorful display on the dealer's shelf, can be packed safely in strong multi-wall paper shipping bags that cut shipping costs to the bone.

Betner Bags are providing special, just-right answers for all kinds of packaged-food problems. Write us about yours.

Betner
a *big name* in bags

Benj C Betner Co. Devon, Pa.
Oklahoma City, Okla. Richmond, Va.
Los Angeles, Calif. Appleton, Wis.



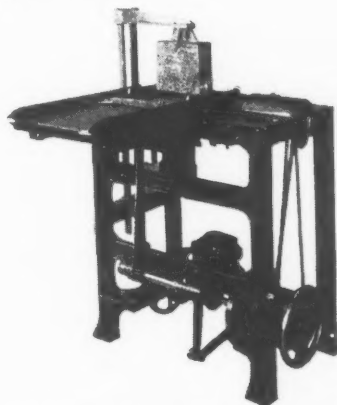
And here are three other famous Betner Bags that perform in the packaging field with the same economy, shelf-display value and product-protection that distinguish the Betner Bag for General Foods.

If Cost Is a Factor

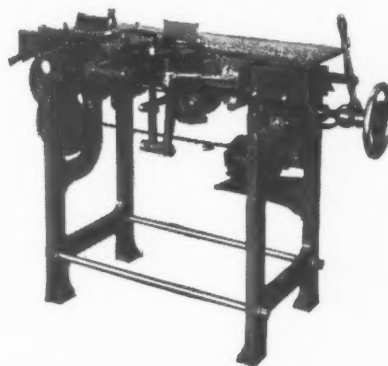
in your 1948
packaging plans . . .

get in touch with PETERS and find out how widely PETERS machines are now being used for packaging lard, shortening, crackers, frozen foods, macaroni, spaghetti and in a wide variety of other highly competitive fields. Where cartoning costs count most, more and more firms are using PETERS equipment to assure themselves of efficient, economical cartoning with no sacrifice in quality.

If cost will be a factor in your packaging plans for 1948, send us a sample of the cartons you are now using. We will be pleased to make recommendations to meet your specific requirements.



This PETERS JUNIOR CARTON FORMING AND LINING MACHINE sets up 35-40 cartons per minute, requiring only one operator. After the cartons are set up, they drop onto a conveyor where they are carried to be filled. Machine can be made adjustable to set up several different size cartons.



This PETERS JUNIOR CARTON FOLDING AND CLOSING MACHINE closes 35-40 cartons per minute, requiring no operator. After the cartons are filled, they enter machine on conveyor and are automatically closed. Can also be made adjustable to close several different size cartons.

PETERS MACHINERY COMPANY

GENERAL OFFICE AND FACTORY

4700 RAVENSWOOD AVE., CHICAGO 40, ILL.



... GETS THERE WITH A STAR BRAND ADHESIVE

The importance of attractively labeled products is beyond question, of course. On the shelves of America's retail stores, and in the hands of consumers, it is of the utmost importance for your labels to be intact and factory-fresh.

There is a Star Brand Adhesive you can depend on to carry your label safely and surely all the way. For assurance in routine or special labeling operations, stick with Star Brand Adhesives. Send for samples without obligation.



Bingham

"MAKE YOUR IDENTITY STICK"

BROTHERS COMPANY

NEW YORK
406 Pearl St.

BALTIMORE
131 Colvin St.

PHILADELPHIA
1315 Race St.

ROCHESTER
980 Hudson St.

Famous 3's



The *Milgate*
LINE

Hot-melt coated and/or laminated papers, cellophane, films, laminated greeting card, lamp shade and functional papers; heat-seal label papers; frozen food papers; decorative wrapping, shelf paper.

"Milgate, your assurance of quality"

Beauty-Pak
TEXTILE PACKAGINGS

A complete line of packagings serving the Hosiery and Textile Industries, including chemically-neutral inserts, embossed glassines, cellophane envelopes "Beauty-Pak your products"

Paksure
FOOD PACKAGINGS

A complete line of wrappings, bags, envelopes and boxes, in cardboard plio-film laminated papers, etc., for all food packagings including frozen foods. Stock or original packagings.

"Be sure with Paksure"

Packaging Division 784 Public Ledger Building
E. W. Twitchell Incorporated Philadelphia 6, Pa.

Plants and People

(Continued)

Toledo General Investment Co., will become effective Dec. 31. Lynch Corp. will operate its five plants as one corporation with three separate divisions, **Glass Machinery Division**, **Par Compressor Division** and **Package Machinery Division**. Executive and general offices of the corporation will be at Anderson, with no change in the directorate or executive personnel.

Alvin E. Dodd, president of the **American Management Assn.**, has been awarded the 1947 **Gantt Memorial Medal**



A. E. Dodd

by the **American Society of Mechanical Engineers** for "distinguished achievement in industrial management as a service to the community." Mr. Dodd has been president of AMA since 1936 and is active in all phases of management.

United Paperboard Co., Inc., New York, announces several changes in personnel: **Frank L. Markle**, previously associated with the Sutherland

Paper Co., has been appointed sales service manager of the Folding Carton Division and will be stationed at the New York office. **Charles H. Plogman** is now sales representative in charge of the Cincinnati area, coming to United from the Kroger Grocery & Baking Co. **O. P. Fussell** has been named superintendent of the Thompson, N. Y., plant.

E. Nobles Lowe, general counsel and public relations director of **West Virginia Pulp & Paper Co.**, has been elected secretary of the company to succeed **Charles A. Cass**, who retired after 38 years with the firm.

Union Bag & Paper Corp. has purchased the **Trenton Container Co.** and acquired a new factory building near Trenton, N. J., in which the corrugated container equipment of the Trenton Container Co. and additional facilities will be installed. The factory will be enlarged to cover 130,000 sq. ft.

Thirteen research scientists, food and container technologists and other professional personnel have recently been added to the staff of the **Quartermaster Food & Container Institute** for the Armed Forces, Chicago. **Burton F. May**, industrial specialist, and **Raymond P. McCormick**, chemist, are new members of the **Container Research & Development Division**.

Robert Gair Co., Inc., New York, announces the completion of a million-dollar plant for the **Boston Corrugated Box Division** at 170 Fawcett St., Cambridge, Mass. The plant is under the local direction of **Gordon W. Olson**, division manager, **Frank E. Newton**, sales manager, and **Hubert D. Sewell**, superintendent.

Roto Bag Machine Corp., 310 E. 22nd St., New York, announces the acquisition of the assets of the **Kono-Mead Equipment Corp.**, with plans to produce an improved cellophane-bag-making machine.

International Paper Products Division of **International Paper Co.**, New York, has opened a new branch sales office at 502 Hibernia Bank Bldg., New Orleans, with **H. Currie** as the district sales manager.

Ball Brothers Co., glass container manufacturer, announces the appointment of **Walter E. Black** as assistant

**Best at the
moment of
decision!**



WHY A.C.M. CARTONS EXCEL

Whiter board—more uniform—
velvet-smooth surface—
more rigid—tougher—
better folding qualities—
greater luster and brilliance—
perfect reproduction in either
letterpress or lithography.



The Secret is in the SURFACE!

At that vital moment when shoppers become buyers, your package may be the deciding factor in their choice. That's why carton selection rates primary consideration in your sales plans. On dealers' counters or shelves it must both *tell* and *sell* to succeed in today's competition.

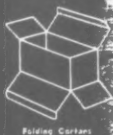
When your product is packaged in A.C.M. Clay Coated Cartons you can be sure that you have put your best "sales front" on display. Their pure white, velvet-smooth surface, produced by an exclusive, continuous process, enhances any design—adds brilliance and luster to either letterpress or offset reproduction.

Accurate control of every step from pulp to finished product assures more perfect cartons, planned and produced to attract shoppers and turn them into buyers!

AMERICAN COATING MILLS

Division of Owens-Illinois Glass Company
America's Largest Producers of Clay Coated Folding Boxboard and High Quality Printed Cartons
Elkhart, Ind. • Chicago • New York • St. Paul • Memphis • Grand Rapids
Affiliated Company: Modern Packages, Inc., Memphis, Tenn.

A.C.M. Clay Coated Cartons
and carton board



Folding Cartons



Counter Displays



Die Cut Blanks Flat or Stitched



Setup Box Blanks



Folding Displays



Display, Displays and Displays

MANUFACTURERS OF
FOLDING CARTONS •
WINDOW & COUNTER DIS-
PLAYS • DIE CUT SET-UP
BOX BLANKS • PAPER CAR-
RIERS • 2 PC. FLATS FOR
STITCHED OR METAL EDGE
CARTONS • DIE CUT IN-
SERTS FOR TANGIBLE
MERCHANDISE • SUIT &
MILLINERY CARTONS
• BAKERY CARTONS •
PARCEL POST SHIPPERS •
PARTITIONS OF ALL TYPES

WESTERN CARTON COMPANY

KING HIGHWAY
KALAMAZOO, MICHIGAN

CREATORS—DESIGNERS OF DISTINCTIVE PACKAGING AND SPECIALTIES
CHICAGO SALES OFFICE—737 NORTH MICHIGAN AVE.—PHONE SUPERIOR 3038-3039



ROUND TUBES AND PACKAGES *Available Now!*

PACKARD offers spiral-wound round tubes and containers in all conceivable lengths and diameters—drum-shape, long, thin, flat. Sturdy and light-weight, PACKARD containers are perfect for any dry commodity—foods, drugs, chemicals, cosmetics, toys, novelties, insecticides, electrical products, shipping, textiles.

And these low-cost containers are available *immediately!* Whether you choose metal-end or paper-cap, plain or labelled—watch your product go in a PACKARD package.

PACKARD CONTAINER CORP.

5811 Park Avenue West New York, New Jersey
Phone Union 5-5818

Plants and People

(Continued)

superintendent of plant services at its Muncie, Ind., factory. Glass production has been resumed at the Hillsboro factory of Ball Brothers Co., which had been closed several months for extensive modernization. Capacity has been increased 25%.

New Jersey Machine Corp., manufacturer of labeling and paper-box machinery, announces the opening of a factory branch office at 2500 W. Sixth St., Los Angeles, with **Peter L. Heguy** in charge.



P. L. Heguy

Container Laboratories, Inc., announces that **Edwin S. Worden, Jr.**, has been added to its staff as research executive. Mr. Worden is a graduate of M.I.T.

The B. F. Goodrich Co., Akron, Ohio, announces the appointment of **Ernest Hookway** as operating manager of the recently created **Plastic Materials Sales Division**.

Highland Container Co., Jamestown, N. C., announces an arrangement by which **Union Bag & Paper Corp.** becomes a minority stockholder in Highland Container Co. and contracts to furnish its requirements of container board.

West Virginia Pulp & Paper Co. announces the following promotions: **George N. Hoover, Jr.**, and **Ray A. Stocker** to assistant managers of the Mechanicville, N. Y., plant; **Melvin L. McCreary** to assistant manager of the Williamsburg, Pa., plant and **J. Lynne Ferner** to general superintendent of the Tyrone, Pa., plant.

National Family Opinion, Toledo, consumer research organization, announces the appointment of C. H. Judson, Jr., as its Eastern representative. Mr. Judson's headquarters will be located in New York City.

Percy P. Morningstar has been appointed manager of the New England branch of **Paisley Products, Inc.**, adhesives manufacturers, with headquarters at 79 Milk St., Boston, Mass. **Sam Stewart** will direct the Paisley branch office at 15th and Market Sts. in the Harrison Bldg., Philadelphia.

Rode & Brand, lithographers, announce that Herbert Kaufman, consultant, has been retained to direct the advertising, sales promotion and public relations activities for this New York firm.

The Syntrol Co., Homer City, Pa., makers of vibratory equipment, announce the establishment of a branch sales office in Montreal, Que., at 4695 Sherbrooke St. W., under the supervision of **C. F. A. Gray**. Syntrol also announces the purchase of the former **H. K. Porter Co.** shell plant at Blairsville, Pa., which will add 100,000 sq. ft. of modern manufacturing facilities.

Phoenix Metal Cap Co., 2444 W. 16th St., Chicago, manufacturer of metal and molded caps for the sealing of glass packages, was awarded top honors for the outstanding direct-mail campaign in the packaging field in the 1947 **Direct Mail Advertising Assn.**'s "Best of Industry" competition.

First Award of Excellence for internal company publications in the St. Louis area has been presented for the fourth time to **Bemistory**, employee magazine of **Bemis Bro. Bag**

YOU'RE PROUD OF YOUR LABEL

Apply It With The Best Labeler In The WORLD

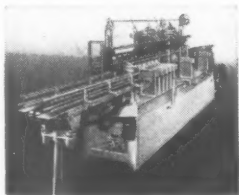


One of these four types of WORLD Labelers is likely to be the best Labeler in the world for you.

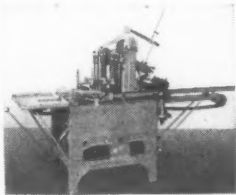
Why? Because only the builders of WORLD Labelers build *all* types and devote *all* their design, engineering, construction, installation and service resources to the single objective of providing the best labeling at the lowest cost

for each individual case.

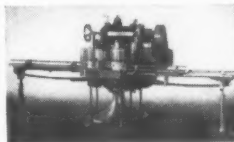
Why not talk over your labeling problems with our nearest representative or, at any rate, send us samples of your labeled containers and tell us your output requirements so WORLD Labeling Headquarters can submit recommendations and estimates.



The WORLD BEE-LINE Labeler for high quality precision of body labels, front-and-back labels, and neck labels if desired to a variety of shapes of glass containers up to gallon size.



The WORLD TURRET Labeler for low cost labeling of a quality worthy of the finest products packed in glass. Applies body label, neck label, all-around neck wrap or foil, as desired.



The WORLD ROTARY Labeler depended upon by many of the biggest and best known breweries, beverage bottlers, and food packers. Handles round containers from 4 oz. or less to 32 oz. or more. Capacity to suit any requirement.

WORLD MODEL S SEMI-AUTOMATIC Labeler has a range of utility that makes it ideal for countless labeling jobs where changes of containers or labels are frequent. Handles every variety of labeling on any size container.



**"YOU GET THE
BEST LABELERS
IN THE WORLD"**

ECONOMIC MACHINERY COMPANY

Builders of World Automatic and Semi-Automatic Labelers for Every Purpose

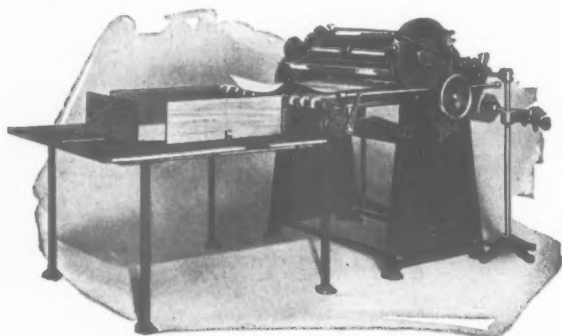
WORCESTER, MASSACHUSETTS

New York Philadelphia Pittsburgh Chicago San Francisco Denver
Louisville Salt Lake City El Paso Seattle Portland Phoenix London
Montreal Toronto Winnipeg Newfoundland Vancouver Mexico City
Sydney, Australia Wellington, N.Z. San Juan, P.R. Ciudad, Trujillo, D.R.



OVER 1000 BECK SHEET CUTTERS

have been sold to lick the "cost thief" in cutting into sheets all kinds of transparent papers and other packaging materials. Particularly are the "ELECTRONIC-EYE" solving the sheeting problems of your competitors. Their unfailing performance for accuracy and high productions might also be the answer to your searching for profit producing equipment. May we answer your questions—NOW?



CHARLES BECK MACHINE CO.

13th & Callowhill Streets

Philadelphia, Pa.

Plants and People

(Continued)

Co., by the Industrial Press Assn. of Greater St. Louis.

Bemis Bro. Bag Co., St. Louis, Mo., announces the purchase of a 15-acre site in Hopkins, a suburb of Minneapolis, for the construction of additional plant facilities. The new plant will be managed by **W. J. Geimer**.

Phillip LeBoutillier, Jr., formerly assistant to the president of the Toledo Scale Co., was recently elected president of the **Ottawa River Paper Co.**, manufacturers of corrugated shipping cases and display stands and paper specialties, Toledo. **F. E. Smyser**, former president, is now board chairman.



P. LeBoutillier, Jr.

Republic Foil & Metal Mills, Inc., Danbury, Conn., specializing in the rolling of plain aluminum foil, has placed **Ray Everitt** in charge of plant production. Mr. Everitt had been the

production superintendent of the Aluminum Co. of America foil mill at New Kensington, Pa., before joining Republic.

Celluplastic Corp., Newark, N. J., producer of plastic containers and molded plastic packaging, has appointed the **Allen-Nelson Co.**, 603 Boylston St., Boston, as New England representative.

Einson-Freeman Co., Inc., lithographers, announce the appointment of **J. J. Twyford** as a sales representative and consultant on special display construction. **William R. Tower** and **Henry L. Ross** have been appointed representatives in New England.

I. W. Preetorius will retire as vice president and general traffic manager of **General Box Co.**, Chicago, on Dec. 31. **Nels G. Wikstrom**, who has been assistant to Mr. Preetorius for the past seven years, will succeed him as general traffic manager. Mr. Preetorius will continue his activity in the traffic field on opening his own office as freight-traffic counsel at 20 N. Wacker Drive, Chicago, after the first of the year.

Construction of the **J. M. Huber Corp.**'s new printing plant in McCook, Ill., has begun with ground being broken for the first of several buildings to be erected on the 16-acre site. This marks the beginning of the company's \$500,000 expansion program. On completion in February the plant will produce 25,000,000 lbs. of printing ink annually.

Edward J. Steiger, industry consultant to the **Adhesives Mfrs. Assn. of Assn. of America**, died recently of injuries received in an automobile accident.

Erwin O. Freund, president of **The Visking Corp.**, Chicago, manufacturers of packaging films, died suddenly Nov. 12.

John N. Gotwals, general manager of **Philadelphia-Carpenter Container Co., Inc.**, died on Nov. 1, while apparently recovering from a long illness.

S. K. Taylor, district manager of the Boston factory of **The Hinde & Dauch Paper Co.**, died on Oct. 19th. Mr. Taylor had been with Hinde & Dauch for 15 years.

Arthur L. Pulfrey, director of personnel relations of all offices and plants of **National Starch Products, Inc.**, died on Oct. 30 at the age of 44.

BLUE

stops the eye... starts the sale



PACK TO ATTRACT IN

Maryland Blue

"Sell Faster"... see other side..

Products
packed
in

BLUE

sell
faster



NOT just a container—but valuable selling and merchandising features. That's what you get when you pack in rich, royal, "eye-stopping" Maryland Blue Glass. Yes, Maryland Blue has played an important part in the sales success of many famous products. Here's why:

- BLUE** MAKES YOUR PRODUCT EASIER TO SEE.
- BLUE** MAKES YOUR PRODUCT EASIER TO REMEMBER.
- BLUE** MAKES YOUR PRODUCT SMARTLY MODERN.
- BLUE** INSURES RICH, DISTINCTIVE APPEARANCE.
- BLUE** STANDS OUT, ASSURES BETTER DISPLAY.
- BLUE** ADVERTISES YOUR PRODUCT IN THE HOME.
- BLUE** BUILDS PROFITS, STEPS UP REPEAT SALES.

PACK TO ATTRACT IN

Maryland Blue

ALSO AVAILABLE IN CLEAR GLASS



Write today . . . tell us the nature of your product and the sizes in which it is packed . . . and let us send you samples of appropriate stock designs. Or, if you use bottles or jars in large quantities, we'll be glad to create a special design for your exclusive use.

MARYLAND GLASS CORP.
BALTIMORE 30, MD.

Pictured on the preceding page are just a few of the handsome stock designs. This diagram makes them easy to identify.

- 1. Cabinet Square - in ½ oz. to 32 oz. sizes
- 2. Chesapeake Oval - in 4 oz. to 32 oz. sizes
- 3. Toilet Oval - - - in ½ oz. to 8 oz. sizes
- 4. Maryland Oval in 1⅞ dram to 32 oz. sizes
- 5. Squat Jar - - in 2⅝ dram to 18 oz. sizes

ARE YOU IGNORING

THIS ECONOMICAL ADVERTISING MEDIUM?



A PRODUCT WORTH MARKING
IS WORTH MARKING WELL

Your corrugated shipping containers offer you one of the most economical advertising mediums available. Your only cost is the small sum required to design and print your message. Distribution has already been paid for.

Just think how low the cost of readership is when the fraction of a cent per container cost covers the large number of potential customers who see your package.

Matthews can help you take full advantage of this opportunity by designing your advertising message and providing the means of printing it. Why not write today for full information?

JAS. H. MATTHEWS & CO.

3932 FORBES STREET

BRANCH

NEW YORK, BOSTON, CHICAGO,

PITTSBURGH 13, PA.

PLANTS

PHILADELPHIA, NEWARK, SYRACUSE

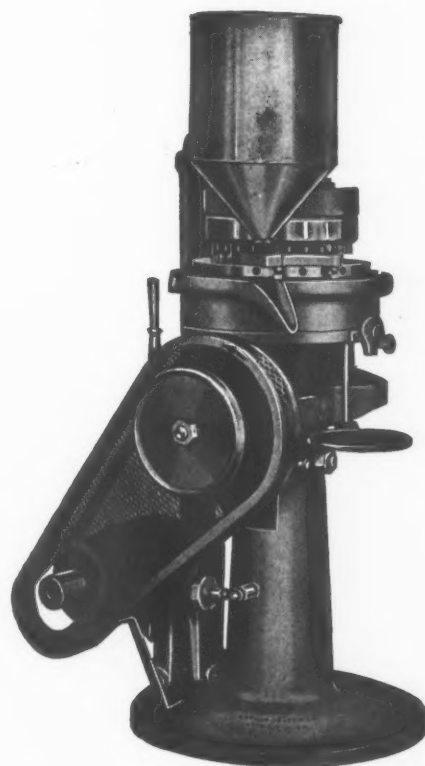
District Sales Offices: Cleveland, Cincinnati, Birmingham, Dallas

NEW ROTARY TABLET PRESS

New series 200-25 tablet machine embodies years of experience in building equipment, incorporates refinements giving an entirely new standard of performance.

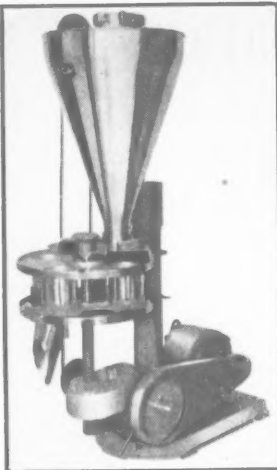
Special features include new variable lower punch pull-down track plus micrometer cell adjustment minimizing punch and die wear and practically eliminating capping; solid steel tie bar; centrally located main drive shaft; lower center of gravity. Range of operating speeds is provided by built-in variable speed drive. Power transmitted through lever operated disk clutch. Special drive materially reduces power consumption. Standard speed motor. Capacity per minute: 300-800 tablets. Diameter of tablet 3/16" to 5/8", maximum depth of cell: 11/16". Floor space: 30" X 36", height: 60", net weight: 1025 lbs.

ARTHUR COLTON COMPANY
2602 E. JEFFERSON AVE., DETROIT 7, MICHIGAN



WHIZ-PACKER

PACKAGE FILLING MACHINES



BENCH MODEL B-2

(Illustrated)

Fills from tiniest containers up to 2 lbs. with popcorn, frozen foods, powders, flakes, cereals, whole spices, etc. Accuracy within $\frac{1}{16}$ to $\frac{1}{8}$ ounce. Weight 115 lbs.

OTHER MODELS: B-1 fills containers up to 6 ounces; B-3 up to 5 lbs., B-4 up to 10 lbs.

ALL MODELS: Speed of 12 to 104 per minute. $\frac{1}{4}$ H. P. Motor.

IMPROVED MODELS • FAST • QUIET • ACCURATE • INEXPENSIVE

The new models retain the sturdy simplicity of previous models. Of particular importance is the totally enclosed driving mechanism, which operates in a bath of oil, eliminating wear and resulting in smoother and quieter operation. Oil, grease and foreign material are kept out of the product. Cups are aligned with discharge spout automatically. It is practically impossible for machine to get out of order.

Immediate Deliveries

**INSIST ON THE ORIGINAL WHIZ-PACKER
DO NOT ACCEPT SUBSTITUTES**

Send us your samples for quotations

MANUFACTURED BY

Frazier & Son

7-11 BREMOND ST., BELLEVILLE, N. J.

ROTOGRAVURE CYLINDERS

**A Complete Service
All Under One Roof and
One Management Responsibility**

- Cylinder Machining
- Copper Depositing and Polishing
- Photography and Art Work
- Cylinder Engraving
- Hard Chromium Plating

CHAMBERS-STORCK COMPANY, INC.

Engraving Plant at Norwich, Connecticut

Sales Office:
60 East 42nd Street, New York 17, N. Y.
Murray Hill 2-2336



For Your Information

Many topics of interest to manufacturers of packaged goods will be discussed at the **Conference on Materials Handling** which will be a feature of the second **National Materials Handling Exposition** to be held at the Public Auditorium, Cleveland, Jan. 12 to 16. Cost reduction in packaging and distribution of goods through savings in handling will be the major theme of the discussion. This will include all phases of the handling operations, from the viewpoint of manufacturer, distributor, jobber and retailer and will include problems of warehousing and shipping. Information about the exposition and the conference program may be obtained from Clapp & Poliak, Inc., 350 Fifth Ave., New York.

Need for the continuous cooperation of government, educational institutions and private industry in the field of food and packaging research was stressed at the first meeting of the recently organized **Associates of the Food & Container Institute** in Washington last month. Speakers included Col. Charles S. Lawrence, commanding officer of the Food & Container Institute of the Quartermaster Corps.; Clarence Francis, chairman of the board of General Foods Corp., and Franklyn B. Snyder, president of Northwestern University.

A new booklet, "How to Use and Prepare Pure-Pak Adhesives" is available from **National Adhesives**, 270 Madison Ave., New York. It describes in detail handling and use of bottom-seal adhesives for paper milk cartons.

Commodity Standards Division of the **National Bureau of Standards** announces the availability of copies of **Simplified Practice Recommendation R228-47, Pallets for the Handling of Groceries and Packaged Merchandise**. These may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., for five cents each, discount of 25% on orders of 100 or more copies.

At the recent annual convention of **Gummed Industries Assn., Inc.**, held in Cleveland, Ohio, **Frank A. O'Neill, Jr.**, of **Paper Mfrs. Co.**, Philadelphia, was elected president for

What's doing

Dec. 15-17—**American Pharmaceutical Mfrs.' Assn.** mid-year meeting, Waldorf-Astoria Hotel, New York.

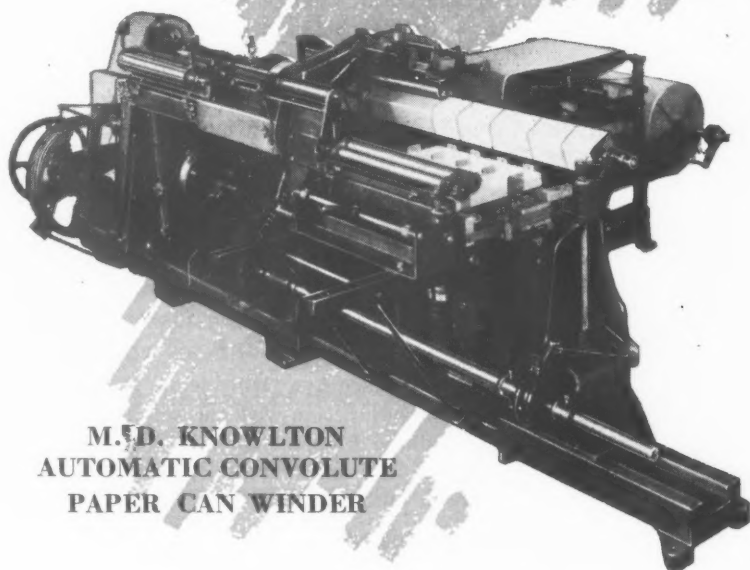
Jan. 12-16—**National Materials Handling Exposition**, Public Auditorium, Cleveland.

Jan. 13-17—**National Food Brokers Assn.**, Atlantic City.

Jan. 16-17—**National Pickle Packers Assn.**, New York.

Jan. 16-23—**National Canners Assn.**, **National American Wholesale Grocers Assn.** and **Canning Machinery & Supplies Assn.**, Atlantic City.

Turns Out Low Cost PAPER CONTAINER Shapes and Designs



**M.D. KNOWLTON
AUTOMATIC CONVOLUTE
PAPER CAN WINDER**

Market-wise users or producers of containers know that attractive shapes and designs are a vital link in merchandising a product.

It is a simple function of the Knowlton Automatic Convolute Paper Can Winder to produce containers in wide variety and at a rate that keeps their costs at rock bottom. One operator will turn out as many as 150 can bodies per minute on this machine which winds and labels 5 at a time. Further adaptability is demonstrated in the broad variations in can body sizes and strengths: round or irregular shapes 1 1/4" to 8" in diameter or across diagonals, in 3 to 6 plies.

Today new avenues to handsomer packaging at lowered costs are being opened by the Knowlton Automatic Convolute Winder. Believe us, your phone call or letter will bring quick response in the form of its applications to your packaging problems.

BOSTON
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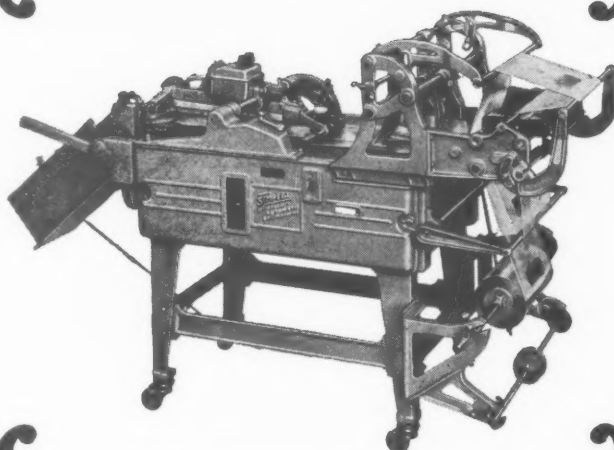
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U.S. Patents Digest

Edited by H. A. Levey

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps are not accepted.

Nursing Bottle, H. H. Ganson (to Hygeia Nursing Bottle Co., Inc. (Buffalo, N. Y.)). U. S. 2,426,927, Sept. 2. A nursing unit comprising a bottle having a cap detachably mounted thereon containing an opening centrally thereof and a nipple adapted to be mounted on bottle and to extend through said cap opening in clamping relation to cap and having a base flange for disposition between top edge of bottle and under side of top marginal portion of cap about its opening.

Package, S. B. Hogdal, Danderyd, near Stockholm, Sweden. U. S. 2,427,858, Sept. 23. A box of stiff material and an unslitted lining inserted therein, box having at its side panels and at least at one end, a set of top panels foldably connected with the respective side panels of box for closing the package, one top panel being a separate-closing flap, while remaining top panels are joined with adjacent top panels at corners of box, having lining longer than box so it can project beyond top panels which enables lining to stay in place during folding down of top.

Bottle Carrier, R. T. Cox, Marion, Ind. U. S. 2,427,838, Sept. 23. A bottle carrier for soft drinks being trough-shaped in cross-sectional form and constructed from rigid sheet material and formed with a plurality of bottle-inserting, removing and carrying slots, slots being elongated in directions transverse to plate and flanges and end portions being somewhat wider and dovetail-shaped to facilitate insertion and removal of neck portions of bottles; handle is attached to median portion.

Bottom-Washer Machine for Battery Cans, A. Schmidt, Weehawken, N. J. U. S. 2,428,098, Sept. 30. A bottom-washer machine for battery cans comprising a bottom-washer receiving die, means for feeding battery cans to a position in back of die and then past die, means for guiding a strip of washer material towards die, cutter for cutting a bottom washer from the strip.

Pressure-Relief Stopper for Containers, G. A. Hall, Racine, Wis. U. S. 2,428,114, Sept. 30. A pressure-relief closure for containers made up of a stopper having a vent channel extending therethrough, forming a top discharge mouth and a bottom intake mouth, a button closure for the top discharge mouth, a shank extending from the top of the button closure, an ear extending from the bottom of the button closure within the vent channel and the closure disk having a vent bleed extending through and communicating with the vent channel.

Vacuum Packaging Machine, S. H. Berch (to The Flexible Vacuum Container Corp., Los Angeles, Calif.). U. S. 2,428,192, Sept. 30. A machine with a magazine for receiving bags having non-re-entrant folds, which bags are arranged in the magazine in vertical alignment with their open end uppermost, means for feeding bags towards one end of magazine, means for drawing outwardly the foremost bag and equipped with expanding means for opening bags to give same a desired shape and means for folding side seams against bag as it moves downwardly.

Collapsible Tube, B. Bogoslawsky, Jackson Heights, N. Y. U. S. 2,428,261, Sept. 30. A collapsible tube comprising a tubular body and so folded and shaped with shoulders to form two parallel plies of material which make up the neck, said neck being so formed that it forms webs, each web having two parallel plies, the upper and lower plies being sealed together.

Cloth and Paper Bag, H. S. Daniels (to Union Bag & Paper Corp., New York, N. Y.). U. S. 2,428,266, Sept. 30. The method of making a paper and cloth bag which comprises forming an incomplete paper tube from a paper strip with edges not meeting, bending the edges thereof, applying adhesive thereto, applying cloth thereover to complete the tube, folding and sealing the edges in hooked relationship and bonding paper over the folds of paper and cloth along the edges of the tube.

Non-Refillable Container, E. A. Planas, Havana, Cuba. U. S. 2,428,291, Sept. 30. A non-refilling bottle closure having in combination a circular apertured plate adapted to be seated on the mouth of the bottle and equipped with a cylindrical spout extending from one side of the plate and having an apertured plate constituting a self-contained assembly adapted to be supported on the

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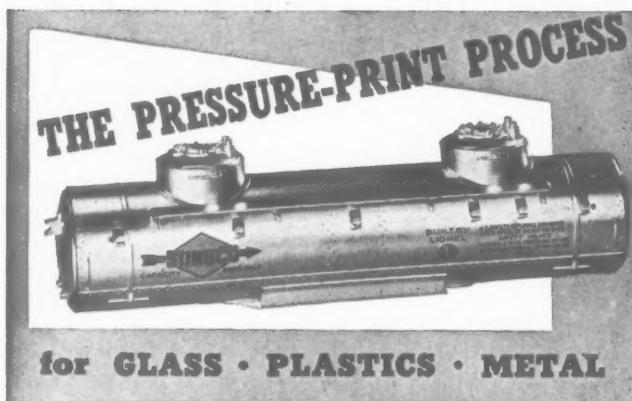


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U.S. Patents Digest

(Continued)

mouth of the bottle and a sealing ring circumferentially engaging apertured plate and mouth and holding assembly in position.

Apparatus for Handling Plant Products, H. C. Brest (to Brogdex Co., Pomona, Calif.). U. S. 2,429,386, Oct. 21. An apparatus for use in preparing, grading and packaging for market a plurality of plant products consisting of a main conveyor having a frame and an endless conveyor belt mounted therein with bins arranged at one side, means for supplying different types of plants at either end of belt and equipped with unloading device.

Artificial Resin and Method of Coating Paper Therewith, E. Cohnhoff, Saint Marcelin, France (vested in the Attorney General of the United States). U. S. 2,428,358, Oct. 7. In the process for manufacture of a sticking film, adding together from 42.86 to 43.75% of one of the group of phenols consisting of crude guaiacol, crude cresol and crude phenol, from 45.16 to 48.25% of 40% formaldehyde, from 5.33 to 5.49% of hexamethylene tetramine, from 1.76 to 1.798% 25° Be ammonia and tannin, after heating and cooling separating aqueous colloidal solution of resin.

Frangible Closure for Containers, O. F. Blom (to American Can Co., New York, N. Y.). U. S. 2,428,354, Oct. 7. A container having an opening and outwardly extending loop portion in body wall, an imperforate friction plug reclosure cover with vertical friction wall fitting within the opening and an imperforate frangible seal clamped within body loop and with a cover for hermetically sealing the container.

Bottle-Carrying Tray, H. I. Richards, Arlington, Va. U. S. 2,428,386, Oct. 7. A tray comprising rigid sheet material having upwardly turned edge portions forming sides and downwardly turned end portions forming supporting feed, a pair of handles mounted on upper edge, handles being pivotally mounted to facilitate loading and unloading of tray.

Pocketed Molded-Pulp Receptacle, W. H. Randall (to Canal National Bank of Portland, Maine). U. S. 2,428,384, Oct. 7. A pack for incandescent bulbs or other pear-shaped articles comprising a sheet of molded pulp contoured to provide a number of individual open-top closed-bottom half pockets arranged side by side with their major axes disposed transversely of and inclined to the plane of the sheet, each pocket providing a neck portion and an enlarged bulbous portion.

Container, C. A. Southwick, Jr. (to Shellmar Products Corp., Mount Vernon, Ohio). U. S. 2,428,396, Oct. 7. A knock-down container being a scored blank with panels secured together to provide an outer carton with side walls and bottom closure section, each of which has a bellows folded therein, and an inner bag having a flat bottom and side walls with re-entrant folds.

Cherry Feeding and Orienting Apparatus, W. W. Kelly (to Food Machinery Corp., San Jose, Calif.). U. S. 2,428,370, Oct. 7. A feeding and orienting apparatus for fruit-handling machines having movable fruit-holding means for receiving fruit stem end up, comprising a hopper for receiving a promiscuous mass of stem-bearing fruit, a plurality of cup bars each having a fruit receiving pocket for picking up the individual fruit and means for supporting the cup bars for independent rotation and discharging means at point above fruit-holding means.

End Closure for Tearing Strip Cans, J. E. Socke (to American Can Co., New York, N. Y.). U. S. 2,428,393, Oct. 7. In an air-tight, sheet-metal container capable of air-tight reclosure, a container body having score lines defining a removable tearing strip for opening the container, a top cover and a bottom end closure for sealing the container body and interior collar inside of body adjacent the tearing strip and having a hermetically beaded connection with the body of the can, said tearing strip terminating in a reclosure curl which attaches over a sealing gasket to make an air-tight reclosing container.

Packaging Method, H. F. Waters, New York, N. Y. U. S. 2,428,440, Oct. 7. The method of producing a fluid-tight bag for packaging commodities, which comprises folding a sheet of flexible material fusible at least on one face thereof around a mandrel with its fusible face within to bring at least two marginal edges of the sheet into registering face-to-face position, to form completely flat fins, applying heat and pressure to heat seal the edge portions, whereby an erected bag with a continuous fusible inner surface is formed.

Shipping Crate for Automobile Motors, H. N. Nutt, Detroit, Mich. U. S. 2,428,500, Oct. 7. A device comprising a cradle to support an automobile motor and a housing for said cradle, the cradle being provided with a pair of inwardly inclined longitudinal



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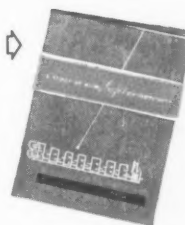
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U.S. Patents Digest

(Continued)

stringers, one being hinged for outward movement, there being backing blocks on the outside arranged to prevent outward displacement.

Carrier, M. G. Otis and O. J. Otis, New London, Wis. U. S. 2,428,501, Oct. 7. A box carrier adapted to receive a plurality of boxes having a flat bottom and removable siding and means for detaching the siding from the bottom to expose bottom on all sides and the sides of the boxes for handling.

Self-Sealing Container for Hydrocarbon Fuels, D. S. Plumb (to Monsanto Chemical Co., St. Louis, Mo.). U. S. 2,428,527, Oct. 7. A self-sealing gasoline container comprising a self-sealing means and an inner liner comprising a polyvinyl acetal resin made with formaldehyde plasticized with diacetin.

Receptacle and Closure Therefor, J. C. Browne, K. C. Browne, New York, N. Y. U. S. 2,428,782, Oct. 14. A receptacle of frangible material for food, formed with a cylindrical neck and an annular hold surface, the neck having a lateral recess formed on the end edge, a cap for same which is a disk-shaped top wall and a cylindrical flange integral with top wall snugly engaging the side wall of the neck and forming a tight seal all the way around the neck of the periphery, the flange having a slot indicium registering with the sealing composition in neck recess and carries a piercing instrument which breaks the vacuum on opening.

Machine for Making Bags, H. R. Denton (to Moist-R-Proof Container Co., San Francisco, Calif.). U. S. 2,428,837, Oct. 14. A bag-forming machine equipped with a frame and plate thereon for slidably supporting a flattened tubular strip of thin, flexible paper-like material for movement longitudinally thereon from one end of said plate and including a pair of power-driven rollers between which said strip is tightly engaged and means for running stripping through cutting blades.

Carton Closure, R. Guyer (to Waldorf Paper Products Co., St. Paul, Minn.). U. S. 2,428,845, Oct. 14. A carton closure for a carton having rectangularly arranged body walls and a closure wall hingedly secured to one of said body walls and extending into proximity with the opposite wall, a double thickness fold hingedly connected to the edge of said closure wall and extending between closure wall and opposite body wall and a flange of double thickness fold folded over and lying outwardly of closure wall.

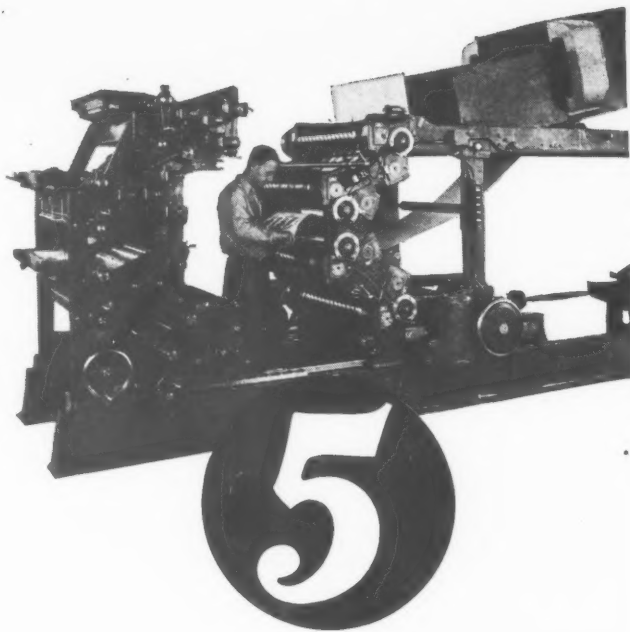
Seal for Containers, L. L. Werth (to Eastman Kodak Co., Rochester, N. Y.). U. S. 2,428,951, Oct. 14. In a container, the combination with a pair of hollow box members adapted to be arranged in telescoping relation to provide an inner and an outer box section and having an open seam between the sections, a strip of adhesively coated material overlying the seam and having a portion secured to one side of the inner section and another secured to one side of the outer section with a pair of marginal areas projecting from each end of the strip and in alignment with the portions, the pairs being adapted to be folded in overlapping relation on opposite sides.

Partition Strip Assembling Machine, J. E. Eilske, A. S. Jackson and F. A. McCormack (to Owens-Illinois Glass Co., a corporation of Ohio). U. S. 2,429,007, Oct. 14. Apparatus for assembling partition strips, comprising a travelling conveyor for conveying groups of the partition strips through an assembling station and being completely motor driven.

Loading Apparatus, W. Pirie, Powell River, British Columbia, Canada. U. S. 2,429,071, Oct. 14. Loading apparatus for blocks and the like comprising discharge means adapted to discharge a series of blocks substantially parallel to each other, an open-sided receiver for the blocks movable below the discharge means, the ends of the blocks being adapted to extend beyond the sides of the receiver and equipped with a guiding member.

Pressure-Sensitive Adhesive Tape, W. Eustis and G. R. Orril (to The Kendall Co., Boston, Mass.). U. S. 2,429,223, Oct. 21. An adhesive tape, including a flexible sheet backing and a normally tacky, pressure-sensitive, substantially non-depolymerized rubber-resin adhesive mass on one side, said mass comprising the dehydrated residue of a combined aqueous dispersion of latex, a normally solid resin selected from the group which consists of rosin, hydrogenated rosin and hydrogenated glycerol abietate, hydrogenated methyl abietate and a water-absorptive adhesive.

Container With Automatic Ejecting Device, A. M. A. Rault, Paris, France. U. S. 2,429,328, Oct. 21. A container for cosmetics and the like having a container body, an axially movable cup adapted to contain a retractable article and slidably mounted in the body a rotatable sleeve coaxial with the body, a cup bottom



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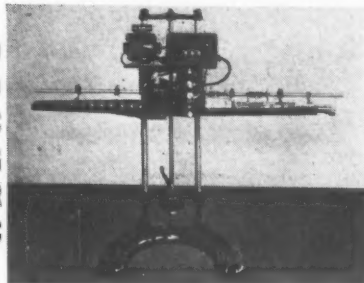
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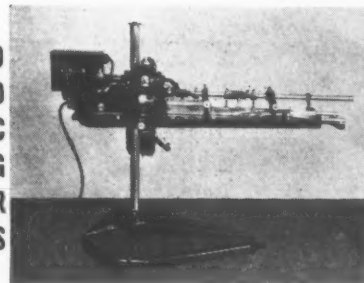
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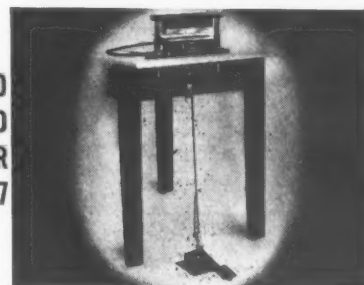
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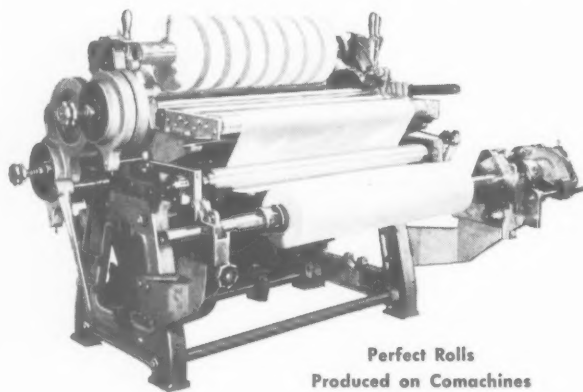
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U.S. Patents Digest (Continued)

distinct from the cup with a straight slot in the body along a generatrix; two helical recesses in the sleeve running parallel toward outlet end of container.

Method and Apparatus for Forming Threaded Caps and Like Articles, A. F. Stagmeier (to General Foods Corp., New York, N. Y.). U. S. 2,429,376, Oct. 21. The method of forming a cap-shaped article having a threaded rim which comprises forming the article on the head of a punch by relative movement of the punch and a cooperating die, the punch head being grooved to form the thread and projecting through the die at the end of the forming stroke, then spreading the rim by outwardly directed fluid pressure to disengage the thread from the punch head.

Cigarette Case or the Like, L. K. Stupell, New York, N. Y. U. S. 2,429,495, Oct. 21. A cigarette case or similar container consisting of a rectangular metal frame forming the side walls of the case and having an integral bottom flange, bottom for case being held in place by a bottom flange and equipped with a top having a metal plate mounted on outer surface of top, one end of metal plate constituting a closing element, the other being a part of the hinge element.

Paper, Cellulose and Like Bags, A. Ashman (to E. S. & A. Robinson, Ltd., Bristol, England). U. S. 2,429,505, Oct. 21. A paper, cellulose or like bag wherein the bag bottom is formed of two folds of the two walls of the bag, a transverse strip of adhesive being disposed between each of the folds and uniting said folds together, both walls of the bag are united together by a transverse strip of adhesive disposed between the two walls and located opposite the adhesive strip of first wall fold and sealing both bottom-forming folds to protect against infiltration of fine powder-like material of contents of the bag when same is filled, whereby a siftproof bag bottom is provided.

Article-Dispensing Machine, W. E. Callison, Dallas, Tex. U. S. 2,429,510, Oct. 21. An article-dispensing machine including a cabinet having an obliquely inclined false bottom and an article-release opening at the lowest point of false bottom, an article storage bin, a plurality of relatively parallel article magazines adapted to receive articles by gravity from the bin, each having an article-release opening in its bottom, resilient means for retaining articles in the magazines, means operable exteriorly of the cabinet for ejecting articles singly from magazines.

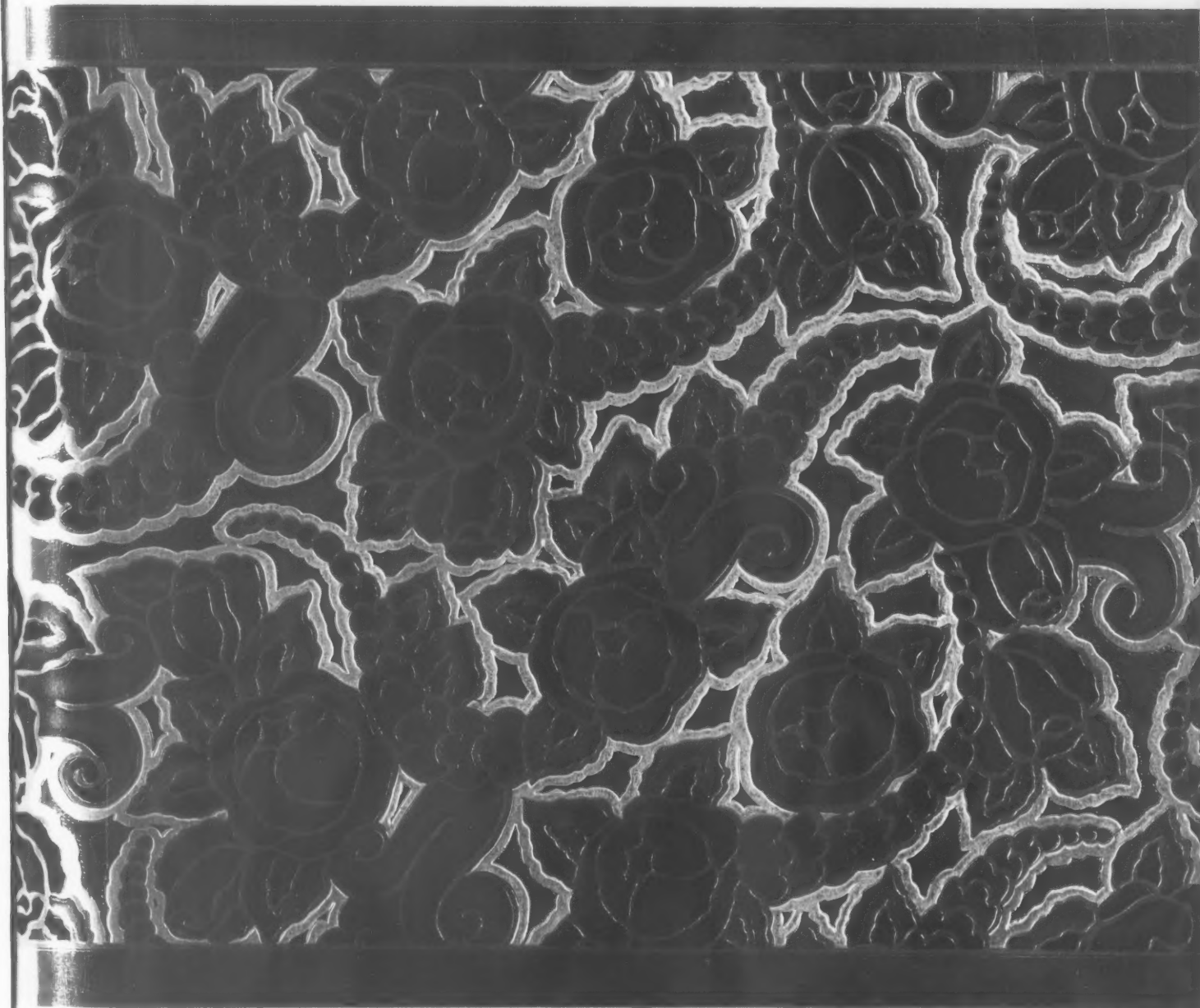
Means for Erecting and Positioning Cartons, R. W. Von Sydow (to the Gardner-Richardson Co., Middletown, Ohio). U. S. 2,429,536, Oct. 21. In a mechanism of this type, spaced moving abutment means, spaced carton feeder and erecting means traveling at the same speed, a hopper for tubed carton blanks disposed above the path of carton feeder and erecting means, said feeder and erecting means having engagement elements for contacting the rear edge of the lowermost tubed carton in the hopper, withdrawing it therefrom and moving it forwardly in the direction of movement of the abutment means.

Package, F. P. Wood (to Simplex Paper Corp., Adrian, Mich.). U. S. 2,429,538, Oct. 21. A package in which is combined an outer container and therewithin an oversized bottom liner forming an enclosure in surrounding relation to a contained article, the liner comprising a double spread of vapor-impermeable asphalt and a vehicle for the two asphalt spreads including three paper plies, one between the two spreads and the others to the outside, all adhesively united, the paper ply upon the outside face of the liner being creped with its ruga extending in a direction toward and from the liner bottom and all plies.

Paper Treating Method, F. P. Wood (to Simplex Paper Corp., Adrian, Mich.). U. S. 2,429,539, Oct. 21. The method of treating paper including the steps of forming in a moving web of paper, open longitudinal corrugations inclined inwardly toward the center of the web from opposite sides to gather the paper from both sides of the web and flattening the open corrugations against the web.

Carton for Powdery Material, G. M. Woodruff (to The Procter & Gamble Co., Cincinnati, Ohio). U. S. 2,429,540, Oct. 21. A blank for a dust-tight rectangular carton, having six face panels articulated so that the top, rear, bottom and front panels are consecutively adjacent in one direction, and the left side, front and right side panels are consecutively adjacent in the direction perpendicular thereto; when the blank is formed into a carton shape, one bottom corner of each side wall is formed by the overlap of two flaps and one panel, the inner one of said two flaps having an incision therein along the line where it overlies the edge of the other of said flaps, said incision having a direction perpendicular to that of the line of articulation of the inner flap.

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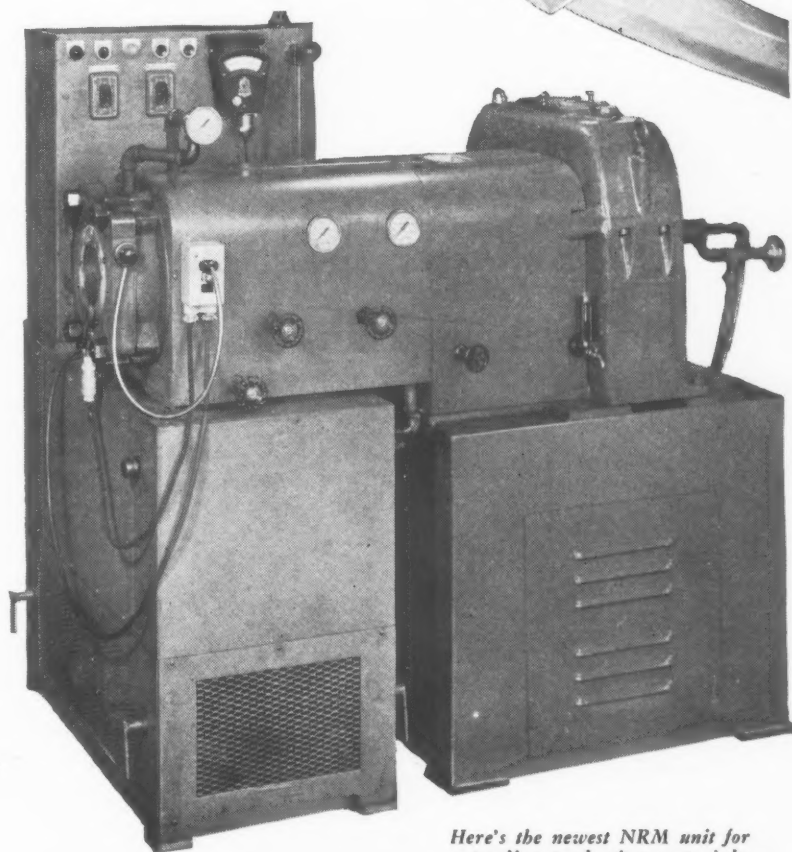
With a capacity of up to 120 lbs. per hour, this new NRM Cub extruder may be the best size and type of equipment for your particular work and production requirements.

For many uses, it is more economical to operate, resulting in direct money savings to you.

To get *all* the facts, write today for complete descriptive data and operating characteristics . . . ask for full information on the new NRM Cub Extruder.

To be used in the manufacture of a new type babies' nursing bottle and for food packing, this polyethylene extruded product must be kept sterile. It is extruded 3¼ inches wide, gusseted off the extruder to 2 inches in width.

Photo courtesy Carter Products Corp., Cleveland



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One, Two-color Press. 12" web with 5" max. cylinder diameter. Equipped with electric eye and automatic cut-off.

F.O.B. Dayton—\$9,000.00

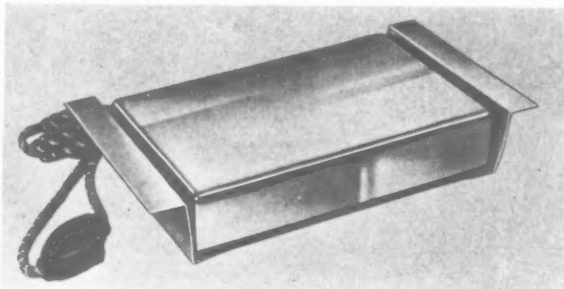
One, Four-color Press. 18" web with 6 7/8" max. cylinder diameter. Machine proper is complete, but not equipped with electric eye or motor drive assembly.

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Trademarks

(Continued from page 148) the magazine's corporate name. On another occasion, the Rayon Corp. of America sought to register the notation "R.C.A." for use on rayon fabrics. The Radio Corp. of America objected to registration. It contended that the notation constituted a complete appropriation of its corporate name; that confusion might result and that the symbol was not registerable in connection with such fabrics. The court so held.

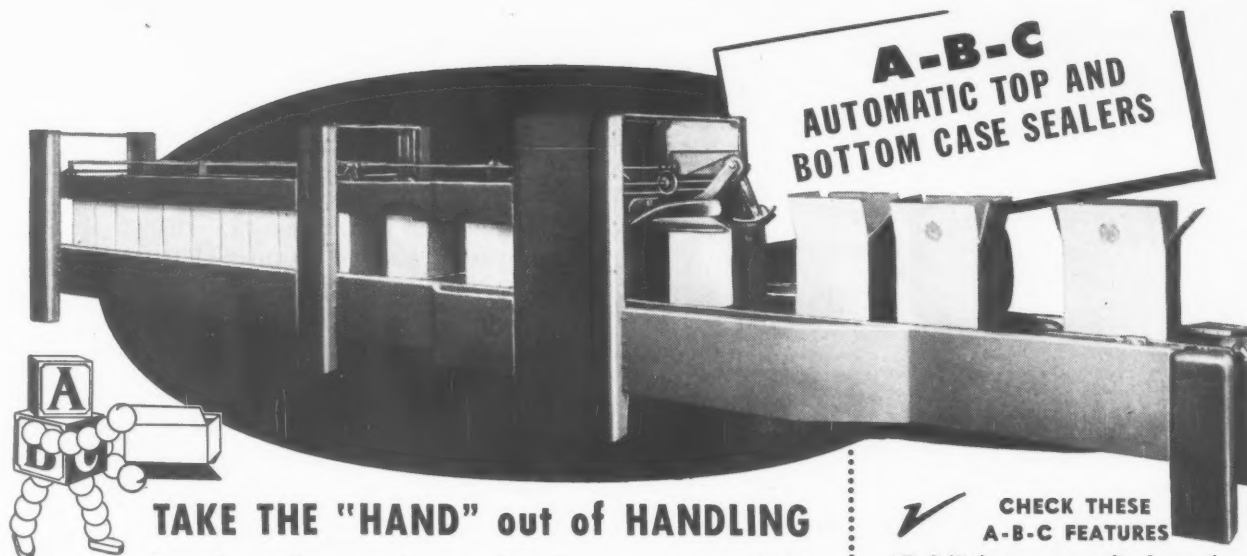
Under the Lanham Act, corporate names will lose some of the protection they now enjoy and their registration by another will be possible in the absence of possible confusion. Under the Lanham Act, the applicant who wanted to use the word "Esquire" for hamburger-molding machines would in all probability prevail. It should be noted that if registration had been refused in view of a recorded corporate title, it would now be possible to secure registration under the Lanham Act if the mark sought to be registered was in use prior to the formation of the corporation whose title was recorded.

The most feared stipulations in the new law are those which enlarge the powers of the Federal Trade Commission and the anti-trust laws through cancellations of trademarks. These provisions were included shortly before enactment and did not receive public hearings. They will enable the FTC to move for cancellation where it deems the trademark has been used in violation of the law. A defendant in a trademark suit might nullify the plaintiff's case merely by alleging that at some time or other the registrant under the new law had violated the anti-trust laws. On the contrary, it is generally agreed that an infringer should never be permitted to get away with his own deliberate fraud merely by alleging that the owner of the mark is violating some other federal statute.

An important concession to package design is the fact that the Lanham Act permits, for the first time, the use of the letter "R" enclosed in a circle as notice of federal registration. The designation "Reg. U. S. Pat. Off." may also be used, but is not required. But without some notice of registration on the package, a claim against an infringer for profits and damages cannot be prosecuted.

While four months is not sufficient time accurately to appraise and assess the merits or demerits of the new act, indications are that owners of established and prominent trademarks are showing a reluctance to register thereunder. The Patent Office itself is sounding a word of caution regarding the advantages versus the inherent disadvantages of immediate registration.

The issue is simple, clear cut, well defined. A mark is supposed to become "incontestable" if it is not challenged by a rival within five years after registration. However, if the mark has become the common or descriptive name of any article or substance, such benefit may not necessarily result. A competitor can raise the question at any time. Consequently, widely known



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★ Applied at an elevated temperature, conventional combining, pasting, and waxing machines are readily adapted to apply Proxmelt. Write to nearest Pyroxylin office for further information.

*Reg. U. S. Pat. Office.

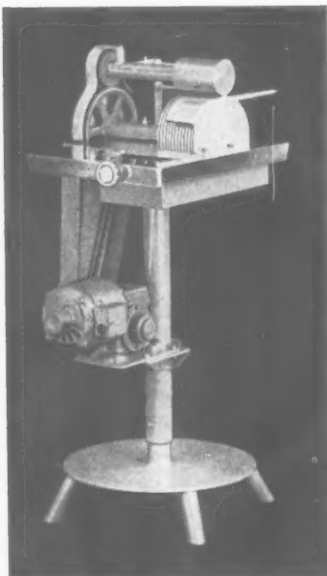
PYROXYLIN PRODUCTS, INC.

PAOLI, PA.

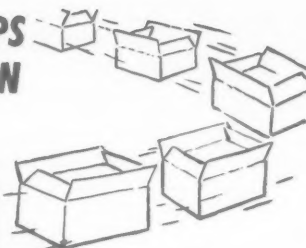
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WICHITA, KANS.

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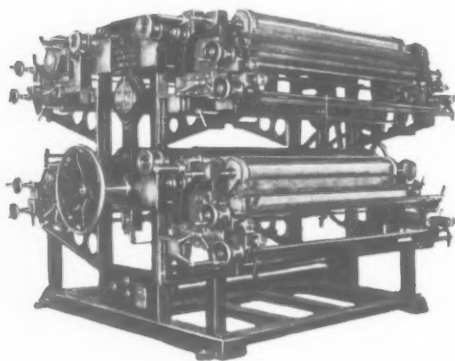
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marks may derive little benefit through registration.

Similarly, registration invites the FTC to ask for cancellation if the mark has been used in a generic sense by a competitor. Such a possibility is particularly true where the patent on the article has expired. Trade-mark owners fear that the commission will take full advantage of its prerogative. Hence, they are staying away from the register to avoid FTC complications.

The year-long waiting period after enactment contributed very little to clarify the many doubts that exist concerning the advantages of registering under the new law. The tendency is to wait for clarification and also for inclusion of certain amendments.

Coatings on kraft

(Continued from page 167) are reported in Table VI. All the coatings increased the bursting strength and the addition of fungicides to the coating materials had very little effect on the bursting strengths. All the coatings decreased the internal tearing resistance of the paper. It is probable that the application of a varnish or lacquer with high-solids content surrounds the cellulose fibres with the added compound and results in the formation of a continuous coating as described by Mosher (4). The force required to tear a network is undoubtedly greater than the force required to tear the fused fibres. However, the tearing-resistance reduction is not seriously large and the addition of fungicides to the coating materials produced only slight changes in the tearing resistance.

Summary

Solvent-type coating materials without and with pentachlorophenol and salicylanilide as fungicides were applied to kraft paper and tested for moisture- and fungus-proofing properties. A para-phenyl phenol-formaldehyde varnish without a fungicide offered good fungus resistance to the papers when tested with four species of fungi. The addition of 5% pentachlorophenol gave slightly increased protection. The application of the coating materials to the kraft paper decreased the tearing resistance, but increased the bursting strength of the papers. Two of the coating materials increased the moisture resistance of the kraft paper.

Acknowledgments

Appreciation is expressed to C. C. Fawcett, E. R. Rechel, M. Frager and A. J. Tuckerman for their cooperation and to the Ordnance Department for permission to publish this paper.

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325 N. Wells St.
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Export pack

(Continued from page 131) shipments properly and adequately to insure safe delivery.

Recommendations

As there is no reason to believe that the conditions responsible for and contributing to the failure of packing to withstand existing export hazards will change materially in the very near future, the following recommendations are submitted:

1. Omit all markings on carrier containers which will describe item content, well-known trade names or the name of the manufacturer. *Use blind marks.*
2. Consignee markings should be large, legible (stenciled) and appear on the container top and on *at least one side.*
3. Use bold cautionary marks with respect to handling, in English and in the language of the country of destination.
4. *Eliminate* all corrugated domestic cartons for any export shipment.
5. Try solid fibreboard if and when available, where domestic cartons or light wood are now utilized.
6. *Band all shipments*, whether wood, solid fibre or domestic carton.
7. *Use staples* on wire-bound or band-stripped wood cases.
8. Have *standard-sized* wood cases, to be *completely filled* by specific inner cartons.
9. Make a complete study of inner cartons to determine *strength test*, as well as tests of separators, liners, etc.
10. Investigate the use of *metal-corner containers* to be used as inner package unit.
11. Have an *observer* go to a Latin American port to witness *actual handling* of shipments.
12. Pending definite standardization of specifications, have *trial shipments* observed from shipper to consignee, with intermediate-condition reports along the route where possible. Use wood, solid fibreboard and domestic cartons for identical shipments to determine which of these packs is the most practicable and economical.
13. It is strongly recommended that the packing engineers and designated personnel directly connected with export shipments in the field of pharmaceutical manufacture, or a common interest, assemble at a designated place to *pool knowledge, materials and equipment* in order to develop and produce or procure a box suitable for export shipping of like products. This group would furnish to any manufacturer of pharmaceuticals information with regard to current methods and materials used to produce the best carrier carton to meet the required standards and with regard to all improvements of materials, processes, etc. All such information would then be made available to the manufacturers for the common good of the entire group.
14. Upon determination of the best methods and materials for export shipments, it is recommended that

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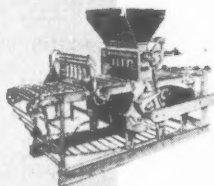
SINCE 1914

"WE'VE
PACKED
THEM IN
FOR YEARS"

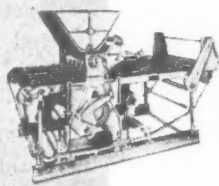


It is a matter of record that the "GEYER" Filling Machines have "packed them in" by solving packaging problems for the food industry over a period of thirty-three years.

Custom built, compact Filling Machines that handle semi-liquids to semi-solids and designed from a cost and operating standpoint to be adaptable for large or small production quotas — there is your assurance of a Filler that has earned an enviable record for performance in packaging.



Fillers are straight line with multiple cylinders . . . Designed for **CLEAN CUT OFF FILLING** for products that seek their own level . . . **BOTTOM UP FILLING** for semi-solids . . . No drip . . . Clean Filling . . . Entirely automatic . . . readily adjustable to any size or shape container . . . Maximum production output.



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Use Geyer Filling Machines

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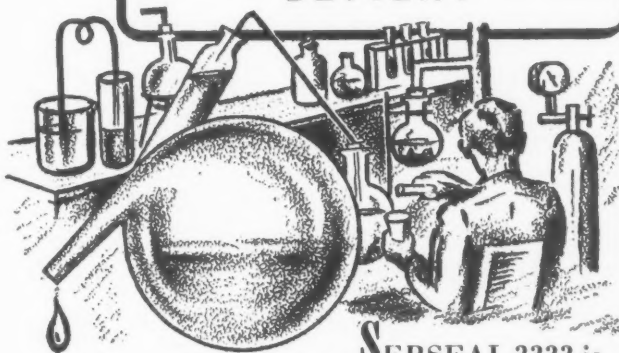
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CONCENTRATE**
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DESIGNED
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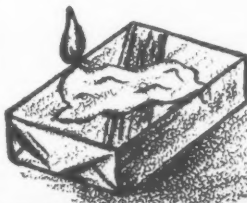


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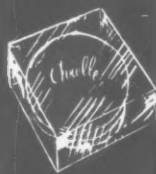
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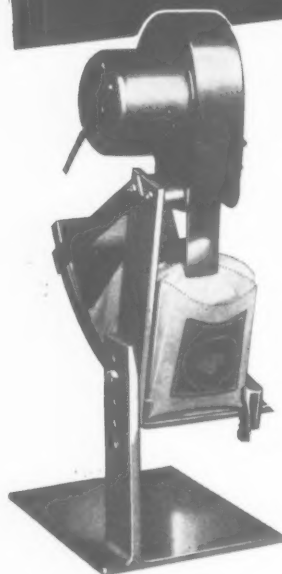
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ANDERSON BROS. MFG. CO., ROCKFORD, ILLINOIS

a training course covering these data be instituted by each manufacturer to all those directly connected with such packing, to assure uniformity.

Acknowledgments

Grateful acknowledgment for assistance in the development of this report is made by the author to: Army and Navy Medical Procurement Office; Alcoa Steamship Co., Inc.; Barber Steamship Lines, Inc.; Grace Line; Kerr Steamship Co., Inc.; Moore-McCormack Lines, Inc.; Container Corp. of America; MODERN PACKAGING Magazine; Solid Fibre Box Group; National Metal Edge Box Co.; American Merchant Marine Institute, Inc.; Insurance Co. of North America; Abbott Laboratories; Home Products International, Ltd.; Parke Davis & Co.; E. R. Squibb & Sons.

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Canadian import embargo

The Canadian order issued Nov. 18, temporarily barring certain imports from the United States in order to conserve U. S. dollar reserves in the Dominion, will have the effect of stimulating Canada to greater self-sufficiency in packaging, but the effect on American packaging will be negligible, the order indicates.

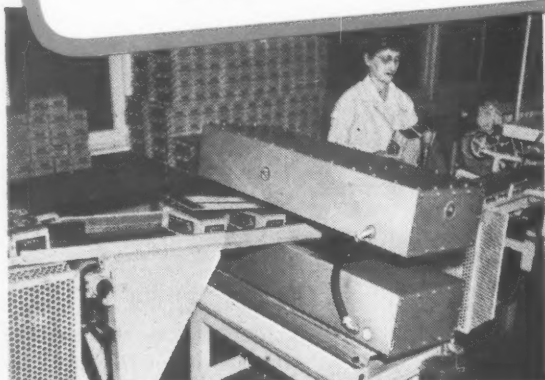
The packaging supplies barred from import are mainly those—such as wrapping paper, fibreboard and paperboard containers—in which Canada has long been nearly self-sufficient. The tariff has made it difficult for American suppliers of such materials to compete in the Canadian market and the volume exported has been so small that its loss will hardly be felt.

The only other packaging supplies mentioned in the embargo order are packages "for the packaging of goods for retail sale of which the component of chief value is copper, brass, bronze or electroplated metal" and synthetic casings for meat.

American users of packaging will be affected in varying degree by the embargo on canned meats, poultry or game; canned fruits and vegetables; prepared cereal foods; cigars and cigarettes; toilet preparations, tooth pastes, etc. Most large American manufacturers of such products, however, have their own branch plants in Canada and will not be affected.

While application of the order has not been made entirely clear and temporarily each case may have to be decided individually, it appears that American manufacturers in many cases will be permitted to ship products into Canada in bulk and have them packaged there by contract packagers. Further information can be obtained from the Canadian Consulate-General, New York.

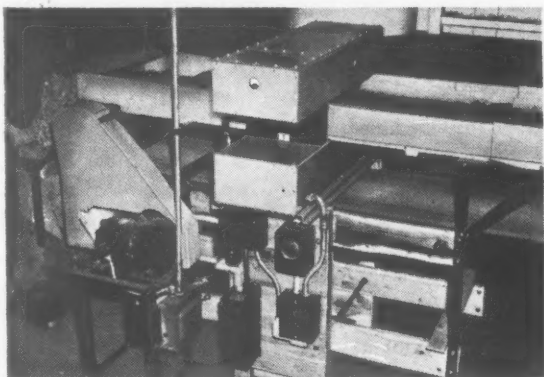
Stray Metal can't pass this electronic watchdog



VICKS COUGH DROPS pass through this RCA metal detector after packaging . . . last of a series of controls on product purity.



THIS WHEATENA metal-detector installation is continuously on duty . . . safeguards quality of this popular breakfast food.



STEPHANO BROS., cigarette manufacturers, electronically inspect leaf tobacco . . . report that the metal detector paid for itself the first month.



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RCA's Automatic Metal Detector provides final check on product purity

TYPICAL of the precautions taken by industry to assure 100 per cent protection to its customers are these installations of RCA's metal detector.

Such equipment helps eliminate the last element of chance from product inspection — is assurance against the possibility, however rare, that a bit of stray metal might accidentally get into your product.

These metal detectors are placed in the

regular production line . . . can spot particles as small as 70 thousandths of an inch in diameter at conveyor speeds up to 600 feet per minute.

The material passes through the metal detector's aperture. *Any* metal or alloy . . . magnetic or nonmagnetic . . . even if deeply embedded, causes the detector to act instantly.

The action can stop the conveyor . . .

sound an alarm . . . reject contaminated packages or bulk goods automatically . . . or mark the material for later removal.

This RCA development provides a final check on conventional visual and mechanical inspection methods. It safeguards product quality . . . preserves customer good will. And . . . if your product passes through valuable processing machinery, you prevent costly repair bills.

Full information on the RCA electronic metal detector is now available. Write Department 118-L.



INDUSTRIAL ELECTRONICS
RADIO CORPORATION of AMERICA
ENGINEERING PRODUCTS DEPARTMENT, CAMDEN, N.J.

In Canada: RCA VICTOR Company Limited, Montreal

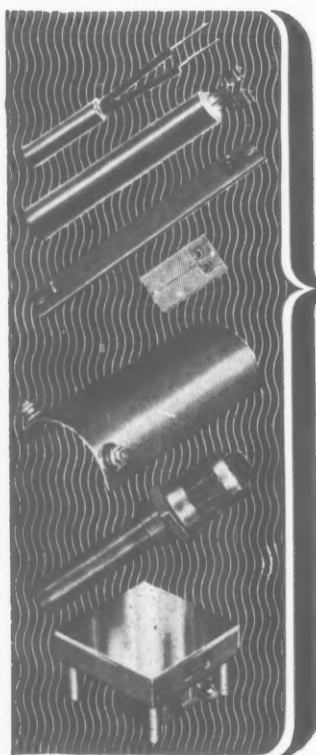
They go for your product

when it's in a wooden chest, box or display case by ROCK. Boxes by ROCK are beautifully designed, sturdily built. Specializing in the design and manufacture of silverware chests, jewelry and display cases for many years has made our name synonymous with fine wood containers.



You will find ROCK containers ideally suitable for your product.

ROCK
Manufacturing Company
Stoughton, Mass.
"From Standing Timber to Finished Product"



from a delicate pre-heating job to a "workhorse" heating task

there's a WATLOW HEATING UNIT to fit the Job

Of the hundreds of standard sizes and shapes, there's a specific Watlow unit constructed especially for your type of heating job in the proper size, rating and capacity.

Whether your job is melting, liquefying, preheating, boiling or hardening, Watlow units offer clean, dependable controlled heat. Cartridge units, immersion heaters, strip units, band heaters and hot plates. Available in assemblies and with controls.

Send for electrical heating data catalog.

SPECIALISTS IN
ELECTRIC
HEATING UNITS

WATLOW
ELECTRIC MANUFACTURING COMPANY
1321 N. 23d St. St. Louis 6, Mo.

Sohio redesigns

(Continued from page 138) encountered to this new and unusual grease quantity.

In developing appropriate treatment for the Sohio dry-cleaner container, a 2-gal. lithographed tin with carrying handle, the designer was faced with the problem of maintaining company identity while avoiding a treatment which would mark the cleaner as a "filling station" item. Accordingly, a cosmetic type of approach was followed, with warm gray and white stripes which appeal to feminine buyers and result in a container which they do not hesitate to buy and take home. Since this item is sold in department stores and other retail outlets, as well as in Sohio stations, the appearance of the containers in mass displays was carefully considered.

A high degree of integration with the Sohio automotive line is preserved through use of the stencil-lettering treatment on the product name and through incorporation of the familiar trademark, which is slightly modified in this instance with a broken rather than a continuous line on the oval and is set against a red rectangular background near the upper left corner of the front panel. The rear panel duplicates the front.

Side panels of the dry-cleaner container are devoted to directions for use of the product, the type being printed in red. At the bottom of the left panel is the circular emblem of the Underwriters' Laboratories, indicating to the purchaser that the product has been accepted as safe for household cleaning use. Sell copy on the front panel appears directly beneath the product name and is in small, upper-case letters, giving the face of the container a restrained, quality appearance. This copy reads simply: "Cleans thoroughly . . . renews colors . . . safe and easy to use." The container is fitted with a screw-type metal closure.

The related Sohio household products, which have not yet made their appearance in the redesigned containers, will follow the same general treatment as that used for the dry cleaner.

This company operates its own can plant in Cleveland, at which all types of general-line cans, pails and drums are manufactured and lithographed. Stenciling of blank-panel containers is handled in the manufacturing department as a part of the shipping process.

CREDIT: Redesign program, Raymond Loewy Associates, Chicago.

Pliofilm on Friendship Train

Production facilities of the Pliofilm Department of The Goodyear Tire & Rubber Co. were diverted recently to the manufacture of special material to be used in waterproofing carload lots of foods picked up by the Friendship Train for European relief.

Moistureproof Pliofilm liners were prepared for 50,000 cartons packed for overseas shipment on the train, it was stated.

FOR AMAZING RESULTS . . . WRAP YOUR PRODUCT WITH

THE NEW Campbell WRAPPER

We invite you to send us samples of your product and wrapper for demonstration.



- **GREATER PRODUCTION** — Packages 120 to 140 wraps per minute.
- **GREATER EFFICIENCY** — One feeder and one packer to each machine.
- **COMPLETE PROTECTION** — Fully glues or heat seals . . . hermetically, if desired.
- **CUTS PRODUCTION COSTS** — More units per minute . . . fewer operatives, less materials required.

Write for complete descriptive brochure.

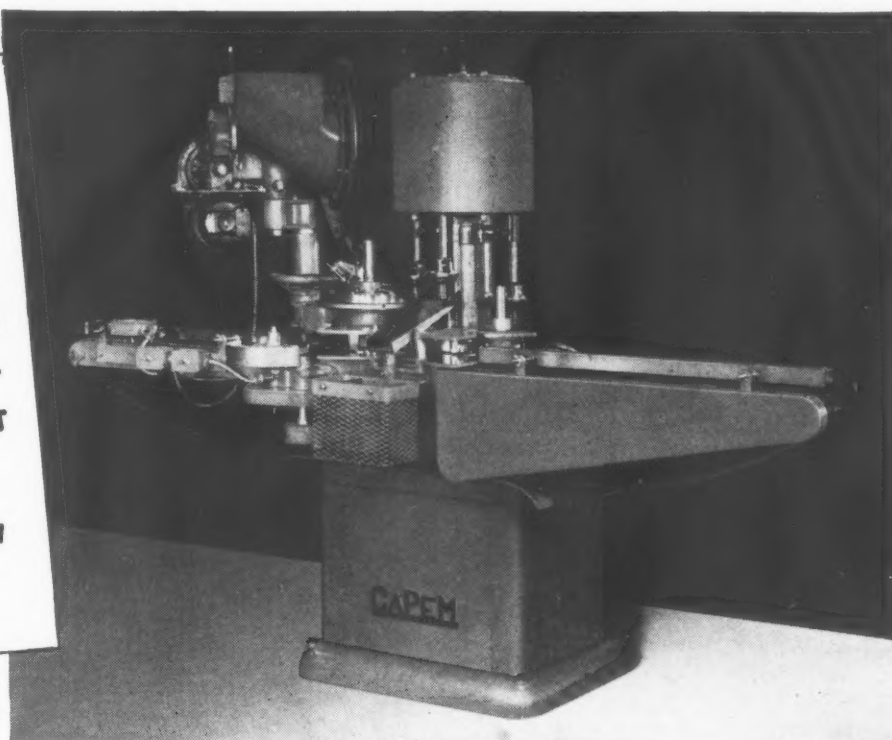
Campbell
WRAPPER

HUDSON-SHARP MACHINE CO. • GREEN BAY, WIS.
Manufacturers

CAPEM

**. . . APPLIES ANY
SCREW-CAP AT 2,000
TO 10,000 AN HOUR
. . . DELIVERS A LEAK-
PROOF SEAL . . . AT
LOW COST**

Available in 1, 2, 4, 6 and
8 spindle models
Write for prices



CONSOLIDATED PACKAGING MACHINERY CORP.
BUFFALO 13, N. Y.

DIE CUTTING

EMBOSSING

Steel Rule DIES

for

THE SKILL
that comes with more than
20 years' experience.

THE SERVICE
that is rendered only by a firm
that devotes its efforts to satis-
fying its accounts.

THE SPECIALTIES
that make their name a byword in
the die cutting field.

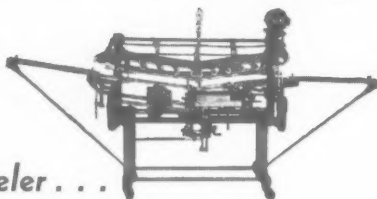
DIE CUTTING AND EMBOSSING
Paper • Cardboard • Rubber • Sheet
Plastics • Thin Metals • Tek-wood

ALSO MOUNTING AND FINISHING
Gramercy 7-5767 Department E

LANSKY DIE CUTTING COMPANY
192½ GREENE ST., NEW YORK 12

New Way Labeling Machines Cover the Entire Can Range

*From 1/4 Pints
To Gallons
with a Single
Adjustable Labeler...*



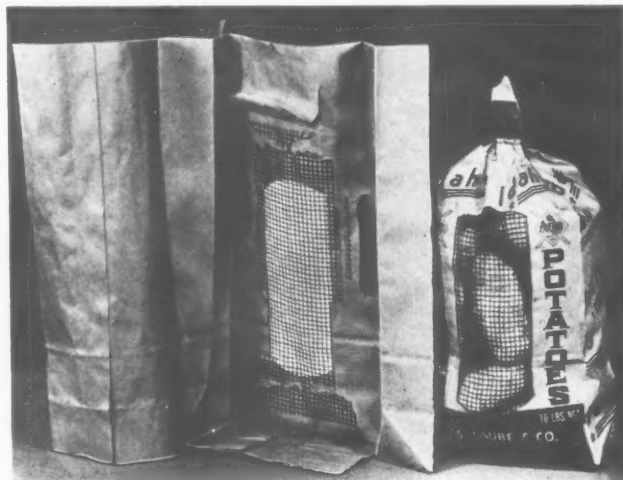
CRCO—New Way Model PG Industrial Labelers are designed to give in one quick-change, high-speed machine the ability to label the entire range of cylindrical containers—tin, fibre or glass—from quarter-pint to gallon. Can be equipped with timing device to handle containers with bale ears or jug handles. Changeover can be made within a very few minutes—no extra parts or attachments being necessary. Send for catalog and prices.



Chisholm-Ryder
COMPANY OF PENNSYLVANIA
HANOVER, PENNSYLVANIA

Cotton mesh windows

A new type of visibility bag designed for use in pre-packaging bulk fruits and fresh vegetables at the shipping point has been announced by Union Bag & Paper Corp., New York. Called Vent-Vu, it is made of wet-



At left, a 10-lb. potato bag has been opened to show how cotton mesh is bonded securely into place between the two layers of kraft paper. Filled bag, at right, shows the extent of both visibility and printing area.

strength paper which can absorb moisture without breaking. The unusual feature of the new bag is a "window" of cotton mesh through which the contents can be seen.

The new bag combines the advantages of product protection, visibility, air circulation and clearly printed brand identification.

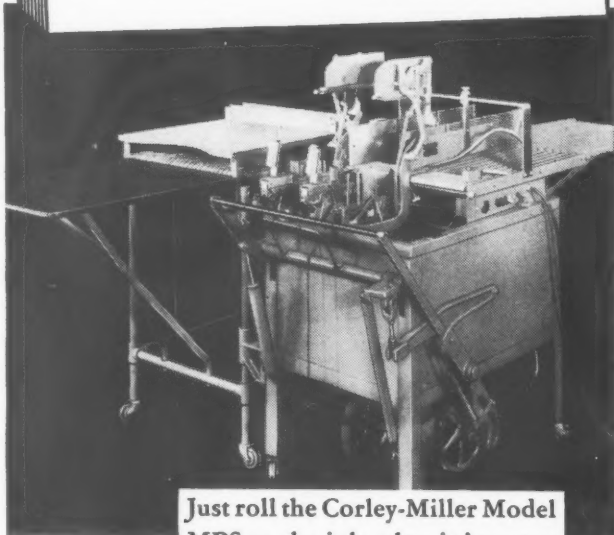
The new bags are entirely machine made of two or more layers of paper on high-speed bag machines and printed at the same time. This is believed to be the first time that cotton mesh and kraft paper have been combined to form a flexible container. Special machines were designed and built to perform this operation. A special moisture-resistant adhesive was developed by Union Bag to bond the mesh strands securely between the paper walls, making the mesh virtually an integral part of the bag.

The bags are made either with or without carrying handles, as desired. The handles, which are also bonded to the bag as part of the machine operation, are of specially treated, creped kraft paper. The mesh is available in four different colors to match the bag printing or the color of the products within. The bags themselves can be printed on all four sides up to three colors.

Because the bags are completely machine made and printed at the same time, very substantial economies in container costs can be effected by shippers of fruits and fresh produce, the company says. The wet-strength paper absorbs—without breaking—any moisture on the fruits or vegetables when they are packed, or which accumulates when they are shipped or stored under conditions of high humidity.

Memo:

Corley-Miller
packaging machines
to keep production
moving



Just roll the Corley-Miller Model MPS to the job, plug it into any wall outlet for power—and production begins to *move* . . the quick, economical way to wrap almost any food product, in a wide range of sizes . . Cuts its own wrappers from cellulose or paper rolls . . Heat-sealing and glue-sealing models . . Just one girl operates, sets it without tools . . One of the many CORLEY-MILLER Packaging Machines that do a hundred jobs. What's *your* need?
... Write today!

• **Send for
information
about**

MACHINES FOR

- ☐ Wrapping
- ☐ Bag-Making
- ☐ Bag or Carton Filling
- ☐ Bag Sealing
- ☐ Sheetling-Gluing
- ☐ Heat Sealing (Hot Plates & Hand Irons)
- ☐ Sandwich-Making



MANUFACTURERS OF CORLEY AND CORLEY-MILLER
PACKAGING MACHINES

14 SOUTH CLINTON ST., CHICAGO 6, ILLINOIS

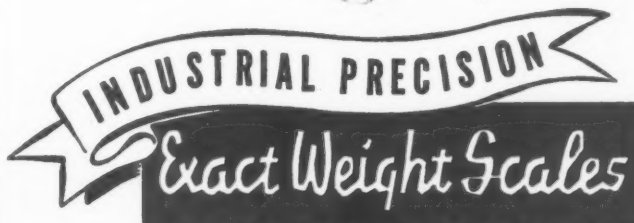
**Good Packaging Scales Assure
Profitable Operation . . .**



Checkweighing 1 lb. boxes of Pecancho Pralines in the Joe Franklin Myers plant, Dallas, Texas

When you gamble with your packaging you gamble with your profits. That's how closely the two are related. Packaging goods simply to fit the container can give several results, but packaging by weight assures a uniform package . . . protects you from overweight . . . eliminates mispackaging by catching underweight . . . insures your profit. Speed and trouble-free operation? You get them too. All of these features are built into EXACT WEIGHT scales. All added up these scales deliver the lowest per unit cost ever attained in industry. Put an end to your packaging problem by writing for EXACT WEIGHT scale details.

EXACT WEIGHT Scale Model #273. End tower construction, compact (fits any packaging operation), short platter fall for speed, may be equipped with platter or scoop as desired. Dial 2 ozs. over and underweight by 1/2 oz. graduations—Capacity to 12 lbs.



THE EXACT WEIGHT SCALE COMPANY

222 W. Fifth Ave., Columbus 12, Ohio
783 Yonge Street Toronto 5, Canada

Speed up Shipments with STENCILING

BRADLEY'S

- STENCIL CUTTING MACHINES
- STENCIL OILED BOARD
- STENCIL INKS
- STENCIL BRUSHES



STENCILING YOUR
SHIPMENTS WILL
IMPROVE THEIR
APPEARANCE
AND SPEED DE-
LIVERY.

We can furnish a machine
to meet every requirement
sizes $\frac{1}{8}$ " to $1\frac{1}{4}$ " letters.



BRADLEY'S 5 IN 1 STENCIL INK
IS INSTANT DRYING—NON-
SETTLING. PROVIDES SHARP,
CLEAR ADDRESSES ON CAR-
TONS, CASES, ETC.

A. J. BRADLEY MFG. CO.

43rd Ave. & 9th St., L. I. City 1, N. Y.

SERVING YOU SINCE 1896

NOW- LABEL ADHESIVE PROBLEMS SOLVED!

P.C. M-2 Adhesive

Specially formulated to meet industry's need for an
IMPROVED LIQUID ADHESIVE to adhere labels to
many difficult porous and non-porous surfaces, such as:

**TIN - PLASTICS - BRASS - COPPER - LACQUERED & VAR-
NISHED SURFACES - CELLULOSE ACETATE - RUBBER
ALUMINUM . . . and many others!**

Machine or Brush Application

Here are the features
that make M-2 your
best bet among label
adhesives:

Permanent, plasticized, high strength
bond.
Effective on most difficult surfaces.
Withstands humidity and temperature
changes.
Non-foaming. Quick tack.
High stability.
Free from objectionable odors or string.
Non-clogging, easily removed from ma-
chines.

1 Gallon Can—\$2.75 per gal.

10 Gallon drum—\$2.25 per gal.

5 Gallon Can—\$2.50 per gal.

30 Gallon drum—\$2.00 per gal.

F.O.B. Plant, Brooklyn, N. Y.

PAPER CHEMICALS, INC.

(Adhesive Division)

510 West 27th Street

New York 1, N. Y.

455 women criticize packaging

New living habits have not changed the American housewife's ideas about what makes a convenient and desirable food or grocery-store product package, according to a survey just made for *Sales Management Magazine* by National Analysts.

Results of the survey are published in the Nov. 10 issue of *Sales Management*, based on a sampling of 455 women in 10 cities and a questionnaire patterned after a previous survey made by this magazine in 1941. Highlights of the current findings were described as follows:

1. Women are influenced in their preferences and dislikes about packaging from six angles—all matters of principle: Is it easy to open? Is it convenient—and sanitary—in storage when partly empty? Does it function correctly in the cooking operation? (Example: Is it convenient to measure baking powder or spices?) Does it make purchasing easier, faster or in some other way more satisfactory? Is the container re-usable? (This latter applied especially to glass.) Does the package in any way save time or labor in the kitchen?

2. The greatest volume of *adverse criticism* among this survey group was directed against the pry-up metal type of closure. Reasons: Hard to get off without chipping glass, doesn't re-seal tightly, doesn't allow re-use of the container.

3. The greatest volume of favorable comment centered on screw-type closures, both metal and plastic.

4. In spite of all the Can Mfrs. Institute has had to say about tin, women are still afraid to store foods in opened cans. Can companies have a double-barreled job to do: one with consumers, one with packers, to combat their alert glass competition. They have new things to talk about. Examples: One-serving cans of fruit juice for quick food-service establishments. A new process which improves flavor and color of certain vegetables. Even a new wrinkle through which food packers can put out "separated" vegetables—as distinguished from mixed vegetables—where food layers are separated by parchment.

5. Housewives generally like the idea of buying fresh fruits and vegetables in clear, transparent wrappings.

6. More than two-thirds of the respondents expressed preference for screw caps, spouts on packages, window packages, inner wraps in paperboard boxes and re-usable containers. More than half voted against metal pry-up tops, corks, unstable bottles, sardine cans.

7. Most complained-about products: milk in paper containers (leakage), olives (tall, narrow, unstable bottles, necks too narrow), sugar (packages leak), jelly, jam and preserves (pry-up metal caps), peanut butter (pry-up metal caps), cereals (don't stay fresh—not enough inner wrapping), catsup (variety of complaints), dry foods in transparent wraps (breakage on shelf causes spills).

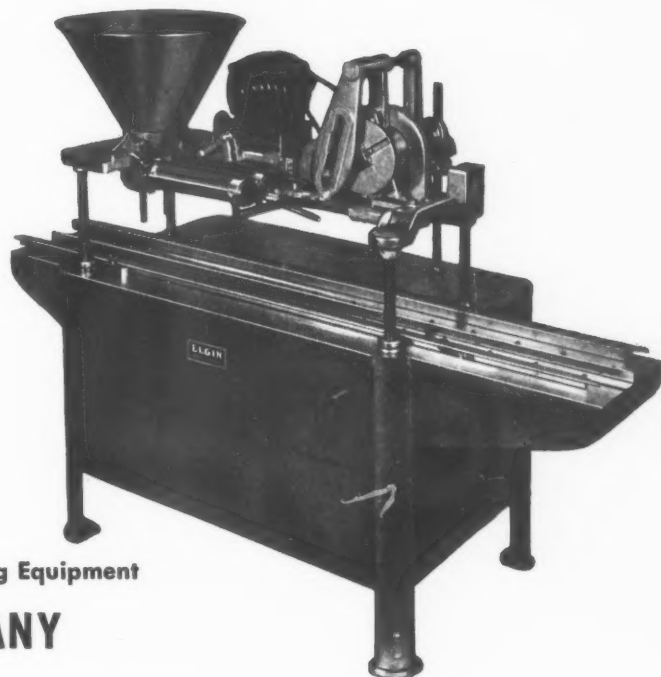
The article reminds manufacturers that the housewife views packages from an angle that differs from that

OUR
50th YEAR

ELGIN Twin-Cylinder FILLERS

- Durability of Elgin fillers and cappers proved by the rugged test of years.
- Continuous research that has led to simplicity in design and dependable, high-speed production.
- Long experience in working with problems of many industries. Intimate knowledge of liquid and semi-liquid filling and capping.
- Production "know-how" that means lower initial cost . . . minimum operating costs . . . outstanding production benefits.

ELGIN TWIN FILLER provides greater flexibility, increased speed, accurate filling. Peanut butter, jams, jellies, creams, sandwich spreads, mustard, mayonnaise. Write for details.



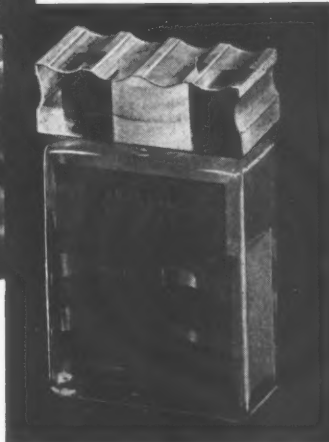
A Half-Century of Experience with Filling and Capping Equipment

ELGIN MANUFACTURING COMPANY

200 BROOK STREET, ELGIN, ILLINOIS



Decorators and Printers



Creative means the finest decoration on your glass, plastic or metal container —

Creative means unlimited production facilities —

Creative means an expert technical staff to solve your printing problem.

Creative

PRINTMAKERS, INC.

200 VARICK STREET, NEW YORK 14, N.Y. • WALKER 5-6300
SURFACE DECORATORS FOR THE PACKAGING FIELD

In Canada: 2424 Yonge Street, Toronto, Ontario

Trilsch

FANCY BOXES * JEWELRY CASES

OSCAR TRILSCH CO.
150-25 18th AVE., WHITESTONE, N. Y.
TELEPHONE • FLUSHING 9-2365

Have you **LOOKED** INTO THESE NEW BOXES?

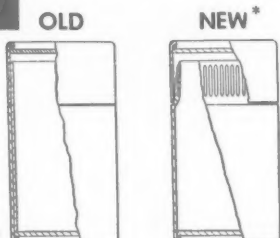
These new tubular boxes are ideal for packaging small metallic parts, giving perfect protection. Unique construction of the neck makes cap tight sealing even



Bonot's famous "Electropoint" phonograph needles now arrive in perfect condition after being distributed in this practical new box.

Ask for samples and prices.

after many removals and replacements. Adaptable for automatic filling and capping equipment.



NIEMAND BROS. Inc.

37-01 35th Avenue

Long Island City 1, N. Y.

of the manufacturer himself, the dealer or the advertising agency. The housewife, it states, is interested in the functional performance of the package as a part of a cooking and housekeeping operation. Manufacturers, generally, seem to underestimate the intensity of reaction in women to packages that cause cut fingers, lost tempers, extra work on clean-up, extra handling through change of container, or waste in measuring and handling. Those who have not polled housewives in a single study, or a continuing study, of their attitudes toward presently-used packages, should do so . . . and should key their inquiries to the point of view of the homemaker, the article advises.

Kitchen cap for effective closure



The plastics division of Owens-Illinois Glass Co. is producing and marketing, through food stores, this molded polyethylene "kitchen kap," intended as a permanent re-seal cap for coffee jars. Because of the flexibility of polyethylene, the cap is said to give a re-seal more effective than that usually obtained with the factory-sealed metal cap, once it has been pried off. It is expected that the convenience of this reclosure, with its finger tab, will increase the popularity of the coffee jar among housewives.

Paper priority for British foods

Packaging priority for food firms is a feature of the latest emergency recommendations issued by the National Assn. of Paper Merchants in Britain to member firms, advising on best use of limited paper reserves.

Paper stocks in Britain are vastly below present requirements and already crisis measures have been adopted in many industries to curb still further the use of paper. In this emergency, food packaging is being given second priority, the needs of all export trading coming first.

The association in a recommendation to members urged that first consideration in all cases be given to requests for all classes of paperboard "required in the furtherance of export trade" and that next in order of priority be "printing and writing papers for requirements essential to commerce for effective trading."

NEW mrm fillers

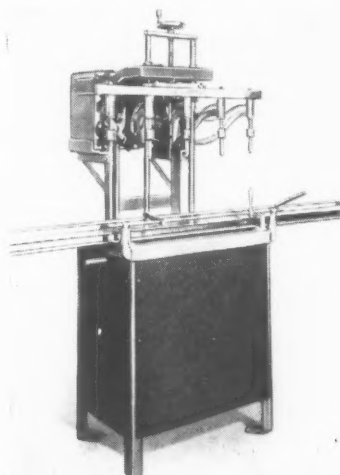
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GRAVITY CAN FILLER

FILLS 1- and 2-gallon cans, quarts or pints.

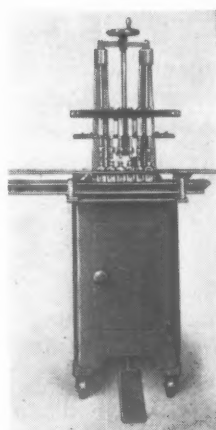
Recommended
for containers
not adaptable
to filling by
vacuum or
pressure.



mrm

MODEL "B"

Small Adaptable Vacuum Filler



4-6 SPOUTS—
Mounted on Casters

Excellent fill-in for short
runs or small production
requirements.

WRITE FOR DETAILS—NO OBLIGATION
Prompt Deliveries



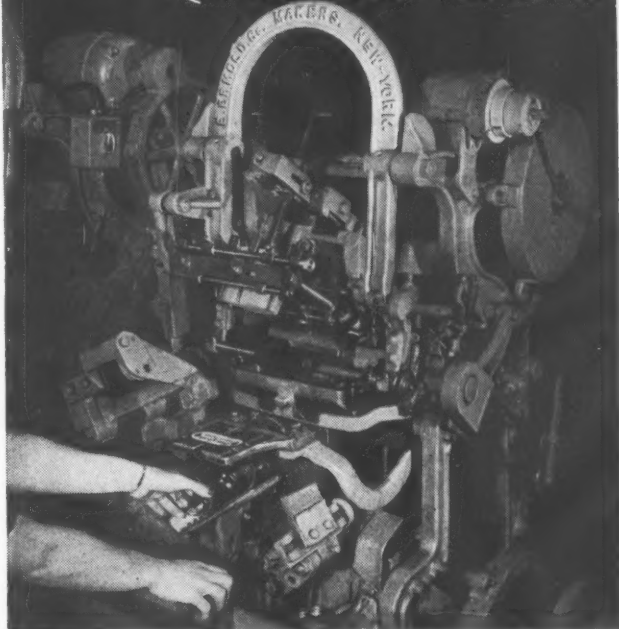
- MODERATELY PRICED TO REACH ALL MANUFACTURERS
- NO SKILLED OPERATION OR MAINTENANCE NEEDED
- PARTS ARE SIMPLE—FEW—INEXPENSIVE

CONSULT US ON YOUR PACKAGING PROBLEMS

mrm CO. INC. Dept. MP-127

custom designed and built fillers and conveyors
191-193 Berry Street, Brooklyn 11, N. Y.
EVergreen 7-3936

CLOSE-UP { OF 3-WAY SAVINGS FOR GLASS PACKERS



...on the ERMOLD Semi-Automatic Labeler!

Saves Time—Changeover from one size jar or bottle to another is quick and easy. In a matter of minutes, it's ready to go—on another product in your line.

Saves Equipment—One Ermold Semi-Automatic Labeler is enough to take care of a wide variety of sizes, styles and shapes . . . from gallon containers down to tiny ampules.

Saves Maintenance Costs—Simple operation and sturdy construction—especially of moving parts—reduces machine jamming, up-keep and repair bills to a minimum.

. . . **For volume output** of standardized lines, your best bet is the Ermold Automatic Multiple Labeler. It labels 4, 6, 8 or 10 jars or bottles *at one time* . . . on sizes from splits to quarts . . . at an economically slow speed of only 20 cycles per minute.



Over 67 years of labeling leadership

EDWARD



COMPANY

Founded 1880

Incorporated 1912

652 HUDSON STREET, NEW YORK 14, N. Y.

Personalize

**YOUR PACKAGE
WITH THE
"PACER" MODEL
HEAT-SEALER**



**EMBOSES TRADE-MARK OR
NAME RIGHT IN THE SEAL**

Lend prestige to your package . . . individualize your product! No extra time . . . no extra labor . . . no extra material required. Name or trade mark can be embossed while bag is heat sealed in one simple operation! One of many exclusive features available with Heat Seal-It Equipment.

Automatic and Foot Power Heat Sealers; Rotary Heat Sealers; Hand Sealing Irons; Bag Making Machines

WRITE FOR CATALOG

HEAT SEAL-IT COMPANY

4316 LANCASTER AVE., PHILADELPHIA 4, PA.



HOTEL STRAND

Atlantic City's Hotel of Distinction

The Ideal Hotel for Rest and Relaxation • Beautiful Rooms • Salt Water Baths • Glass inclosed Sun Porches • Open Sun Decks atop • Delightful Cuisine • Garage on premises.

Open All Year

*Fiesta Grill & Cocktail Lounge
Favorite Rendezvous of the Elite*

Exclusive Pennsylvania Ave. and Boardwalk

Produce packaging

(Continued from page 111) cents. All of these estimates of premium price were on the condition that the packaged produce be of superior quality.

Of the 37 replies from retailers on the type of package preferred for lettuce and cauliflower, 21 favored the individual head wrapped with transparent material without the use of a boat, carton or tray and 16 favored an overwrapped carton or tray.

Preference toward the plain cellophane wrap was based upon the greater visibility afforded by this type of package. Those preferring the overwrapped boat like its ease of display and appearance on the retail stand, its ability to pack better in the shipping container and in the shopping bag. It is interesting to note that several retailers like the plain-wrapped head for exactly the same reasons.

Of 36 replies to the question of where packaging should be done, 18 retailers believed that packaging should be done at the shipping point, 13 believed it ought to be done by wholesalers and five by retailers.

Retailers generally agree that they should not do the packaging, but that it should be done by wholesalers or shippers. Which of these two should or will do it is subject to many "ifs" and "buts" in the minds of retailers.

Cado up front

(Continued from page 141) it was previously thought unnecessary; there is a flexibility that allows small packages to be interchanged in the larger cartons and economy of packaging has been maintained. The fact that the packaging production meant less than a 5% increase in costs and has resulted in doubling and even tripling product sales in stationery stores is proof that this packaging has been effective and successful.

From its packaging efforts this company has learned much about merchandising and will put this knowledge to work. Actually, two new developments may be accredited to this new-learned knowledge. The first involves selling the Fountnbrush with six different colored tops (a factor which has attracted feminine buyers as well as male). The second is the introduction on the market of a de luxe gift package for the Gold-Tone Fountnbrush which will be retailed in a gold box that will, it is hoped, make an attractive show-case package and inspire a gift business.

CREDITS: Design, Julius Bronstein & Associates, New York. Boxes and cartons, Box Specialty Co., Brooklyn. Display, Creative Displays, New York.

ADDENDUM: Jesse Jones Box Corp., Philadelphia, is the designer as well as the manufacturer of the box-type record album illustrated on p. 105 of our November issue.

CORRECTION: In the item on the new display for O'Sullivan Rubber Heels, "MODERN PACKAGING," Nov., 1947, p. 136, an error was made in crediting the lithographer. The display was lithographed by Brett Lithographing Co., Brooklyn.



Season's Greetings

*TO ALL our customers and
friends we send sincere
Holiday Greetings and best
wishes for a happy, healthy
and prosperous New Year.*

PETER



PARTITION CORP.

Manufacturers of Partitions for Paper Boxes

**647-649 LEXINGTON AVE.
BROOKLYN 21, N. Y.**

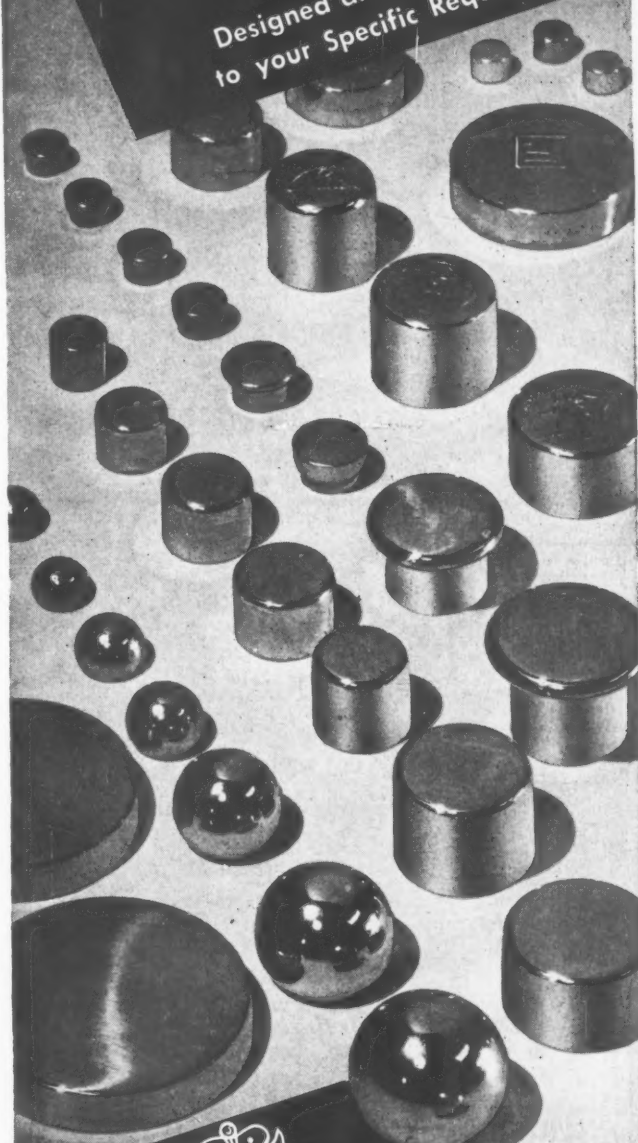
Telephone: FOxcroft 9-2129




DECEMBER 1947

*Top off
YOUR BOTTLE OR JAR with a
RICHFORD METAL CLOSURE*

*Any Size Plain or Embossed
or
Any Shape
Designed and Manufactured
to your Specific Requirements*



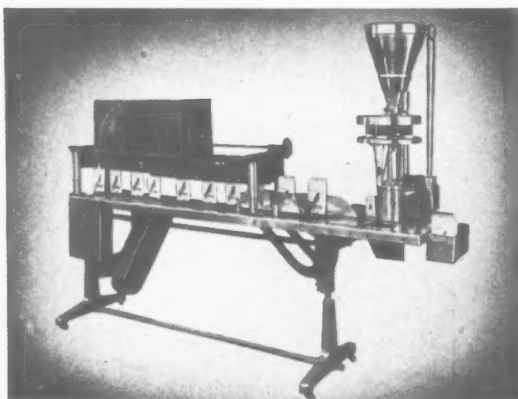

**RICHFORD
CORPORATION**
221 Fourth Avenue, New York City
Represented in: St. Louis, Kansas City,
Chicago, Los Angeles,
Pittsburgh, Cincinnati,
Minneapolis

KINKS IN YOUR PACKAGING LINE?

Our job is to supply standard equipment to do standard packaging jobs like wrapping, sealing, conveying and filling.

We also design and engineer efficient packaging systems and design and build special machinery for special packaging needs.

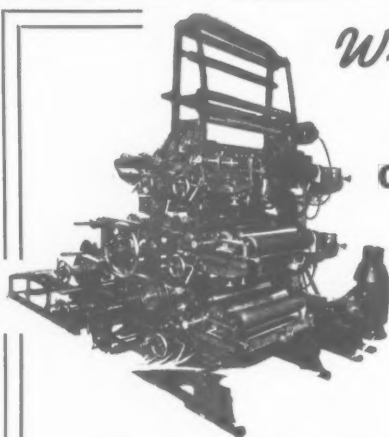
If you need any kind of help in setting up or modifying a packaging operation, we'd like to consult with you.



This compact filling and sealing set-up for coffee bags is low in cost, easy to operate. Speeds of 35 to 40 bags per minute with one unskilled operator.

WRAP-ADE MACHINE CO.

778 Bergen Street • Brooklyn 16, New York
Phone: NEvins 8-8052



Wrap it in
**PRINTED
CELLOPHANE**

POTDEVIN MULTI-COLOR ANILINE PRINTING PRESSES FOR CELLOPHANE

Rolls of cellophane printed on this POTDEVIN can be converted into printed bags on POTDEVIN Cellophane Bag Machines or used as wrappers for products such as candy bars, bread, etc.

Write for further information.

POTDEVIN MACHINE CO.

EST. 1893

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Shipping container research

Determination of the principal causes and prime responsibility for shipping losses to packaged goods marks the progress being made by the Shipping Container Institute, New York, in their goal of reducing loss and damage to packaged goods, according to T. J. Gross, managing director.

The initial nation-wide study, extending over 13 months, investigated the life cycle of more than 700,000 fibre shipping containers in an effort to ascertain reasons for damage to packaged freight. This study is the first step of an extensive research and educational program to reduce the sharply increased amount of shipping damage.

The actual need for and importance of this program are demonstrated by the amounts the railroads alone were forced to pay out in damage claims—\$78,791,370 in 1945, rising to \$94,300,672 in 1946.

Extending from May, 1946, through July, 1947, the survey studied a total number of 711,808 containers, which were carried in 502 freight cars from coast to coast and from border to border. Of these containers, 5,177 were reported damaged on arrival.

Early results of the Shipping Container Institute's study indicate that a major share of the responsibility for shipping damage must go to the shippers and their personnel. Findings bear out that faulty, careless loading practices are a main cause of damage to freight shipments.

Most critical hazards appear to be rough handling during loading (especially dangerous to commodities in glass), excessive slack in the car due to failure to load tightly, weak or inadequate bracking, and nails, wires, straps and boards left in the cars from previous use and not removed before loading—all causes under the shippers' control.

The carriers also appear to be responsible for an important share of the hazards resulting in the high rate of shipping damage. Rough handling, leaky freight cars, broken floors, floor racks and car walls appear to be the greatest damage causes under the railroads' control. The study indicates that most of the damage occurred in freight cars in bad condition, the least damage in freight cars in good condition.

Shipping-box manufacturers expect that they themselves will also be able to contribute to the reduction of loss and damage through scientific advances in fibre-board manufacture and box construction. As part of the Shipping Container Institute's program, studies are being carried out by the impartial Institute of Paper Chemistry in Appleton, Wis., testing different fibre box materials and constructions.

The Shipping Container Institute was founded by a group of fibre-box manufacturers to provide technical information to the fibre industry and to conduct fundamental research. Its purpose is not to promote, but to find out—and to make its knowledge available to its members and the users of their products so that present conditions may be improved.



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Salesman, salaried. For leading paper manufacturer, Northern New Jersey. Must have connections with buyers of printed box covers, labels, printed wrappings, paper etc., and syndicate chain buyers of printed paper novelties. Write full details and salary expected. Box 610, Modern Packaging.

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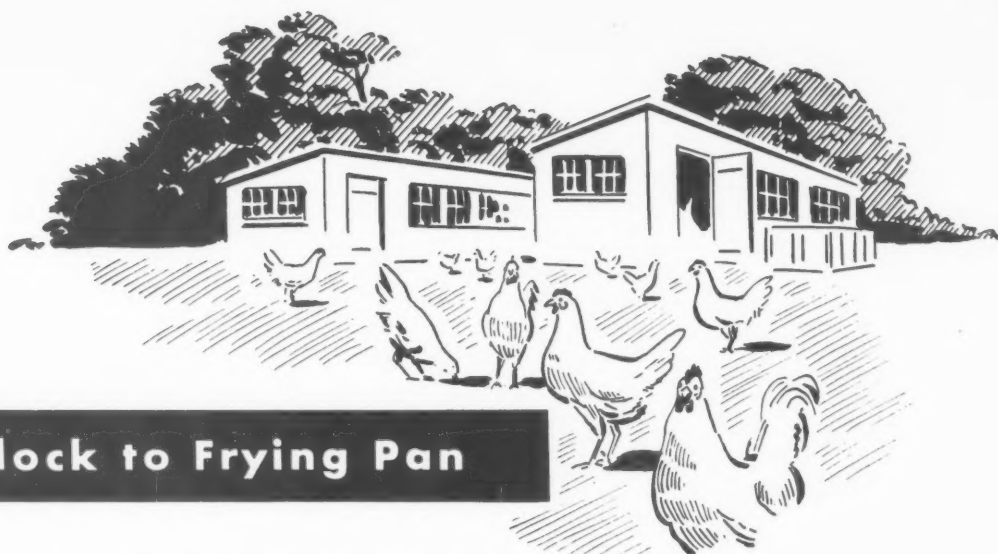
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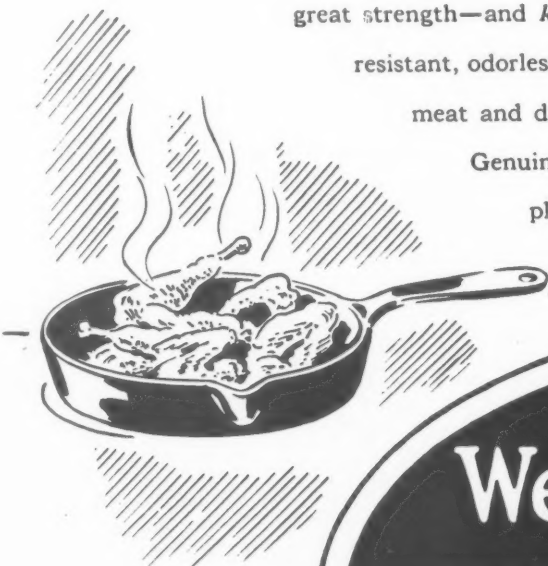
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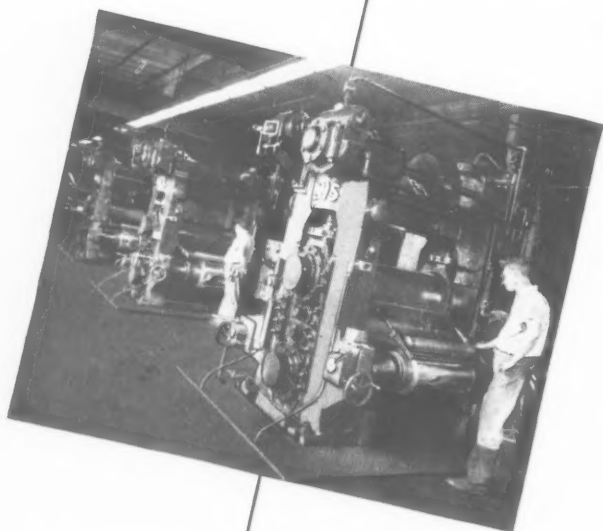
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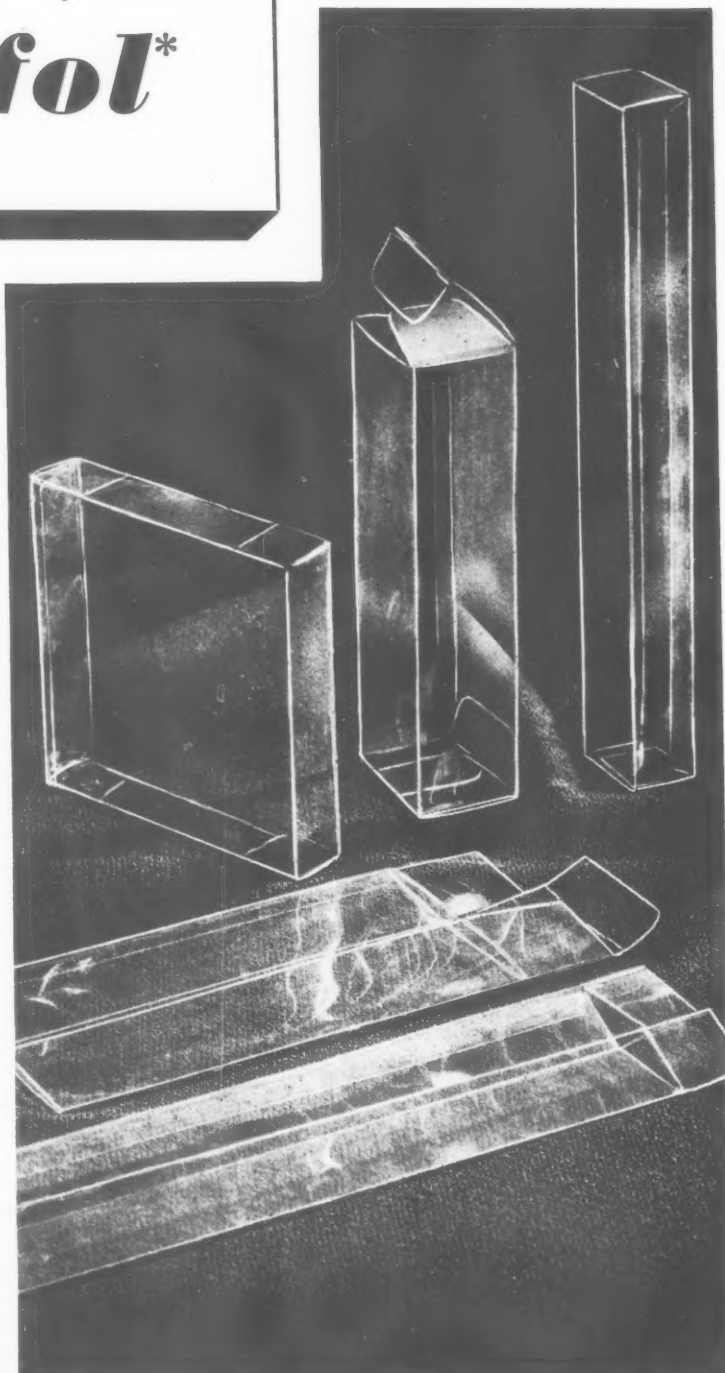
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Modern PACKAGING

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225



"This advertising message, appearing in 4-color cover position in NEWSWEEK is developing business for Monsanto Lustron molders and fabricators."

"to sell quality....look the part"



Boxes molded by General American Transportation Corporation, Chicago, Illinois.

for example

LUSTRON

A MONSANTO PLASTIC

BOXES

for

Camembert Casino

made by KRAFT

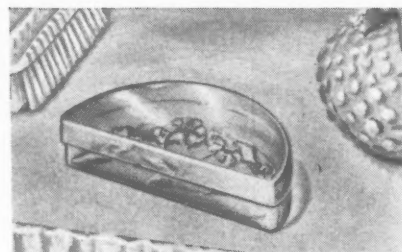
To present a connoisseur's cheese, Kraft Foods Company wanted something distinctive, something exquisite in a package. The result . . . after two years study and work by Kraft and Monsanto plastics technicians . . . this first nationally sold food product in a molded re-use container, made of sparkling, crystal-bright and clean Lustron.

How ideally does Lustron's unique set of properties fit this application! First of all, consider the beauty of the material, its shining brilliance (as well as the rainbow choice of colors). Then look at Lustron's light weight, important in all packages. Also the relative low cost, and the ease and speed of manufacture

in mass production techniques. Consider Lustron's freedom from taste or odor, the resistance to acids, alkalies and water . . . the dimensional stability (the lid fits, it keeps its fit) . . . and finally Lustron's strength, especially at low temperatures.

If this significant, new application of Lustron to quality, low cost, molded packages interests you for your business . . . if you would like to know more about how Lustron styling and settings can trade your product up, write direct for expert help and information: MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield 2, Massachusetts.

Lustron: Reg. U. S. Pat. Off.



BONUS VALUE...the re-use of molded packages adds real value, real sales appeal. This Kraft half-round box is a perfect trinket box for the boudoir, a stamp box for your desk, fly box for the fisherman, etc.



SERVING INDUSTRY...WHICH SERVES MANKIND



*But Mom, they
LOOKED so good!*



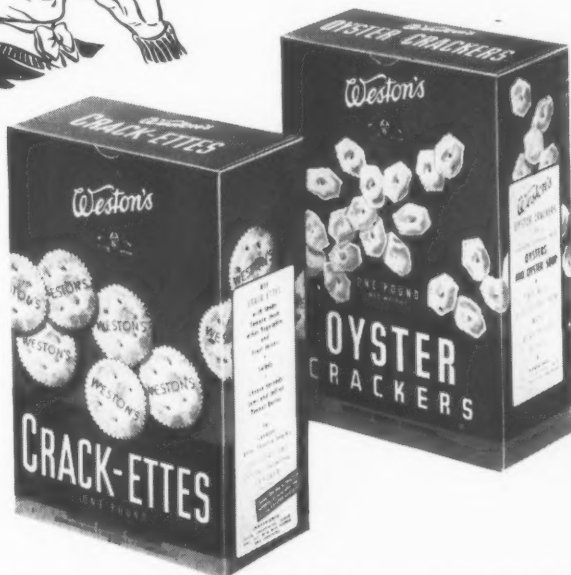
Everybody is reaching for these sparkling Weston Biscuit Cartons! On grocer's shelves they're sure stoppers. Bright colors plus realistic reproductions of the crackers are so tempting that few can resist them. Packaging their products in sales-inviting cartons such as these has helped to establish Weston's eminence in the specialty cracker field.

Weston's Crack-ettes and Oyster Cracker Cartons are typical of the production of the Michigan Carton Company. Boxboard, made in the Michigan Carton's own mill, is uniform and white — colors print bright and true — in fact, every step of production is carefully controlled so that the finished carton faithfully reproduces the beauty of the original design.

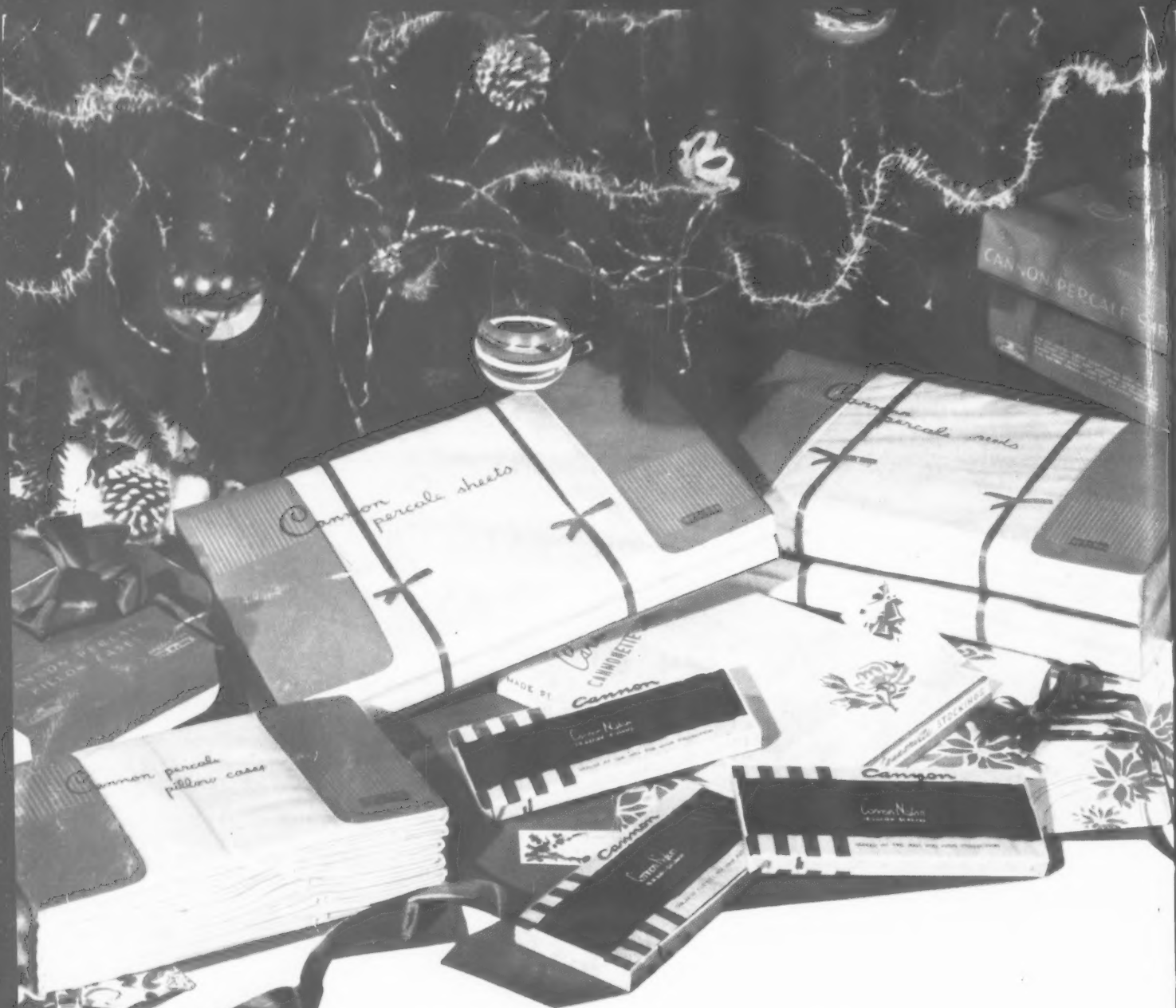
If you are looking for eye-appealing packages — cartons that customers won't forget — check with us today. Let us show you what we can do to create and produce a sales-building package for your product.



... and they taste swell!



PACKAGING ENGINEERS FOR THE NATION'S TOP PRODUCTS



Lovely enough for Christmas giving

yet equally desirable for everyday selling. Designed by Cannon Mills and produced by Shellmar, these colorful and attractive wrappers create an atmosphere of luxury for Cannon Sheets,

Pillow-cases and Nylons and give them maximum protection against soiling and damage.

If you have a pet package design, you'll do well to have it produced by Shellmar.

Sales Offices in Chicago, New York, Cincinnati, Denver, Detroit, Kansas City, Minneapolis, San Antonio, Atlanta, Baltimore, Boston, Philadelphia, Pittsburgh, Los Angeles, Salt Lake City, San Francisco, Seattle.



SHELLMAR

PRODUCTS CORPORATION

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